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University News

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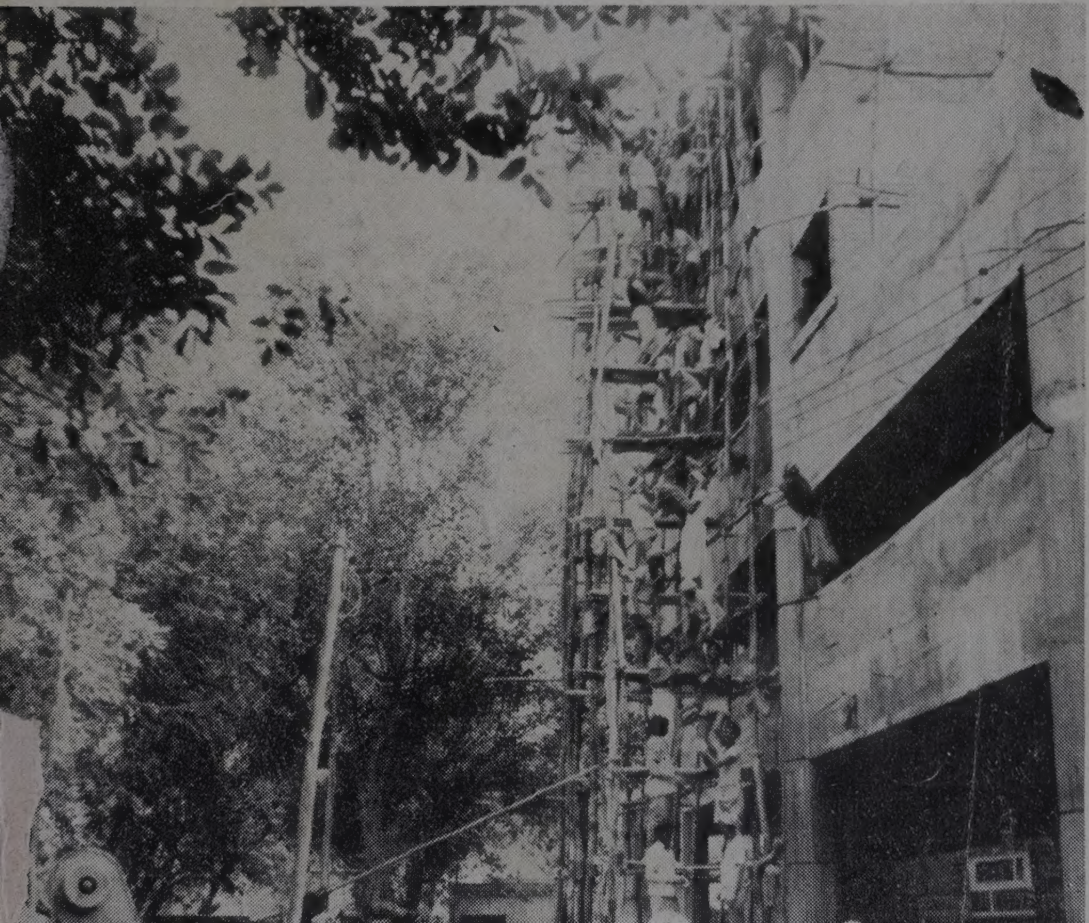

AIU HOUSE

Under Construction

CLASSIFIED ADVERTISEMENTS

THE UNIVERSITY OF BURDWAN

RAJBATI : BURDWAN
WEST BENGAL

Advertisement No. 6/83-84
Dated : 9 December, 1983

Applications in the prescribed form are invited for the following posts in the approved scales of pay (viz., Professor : Rs. 1500-60-1800-100-2000-125/2-2500/-, Reader : Rs. 1200-50-1300-60-1900/-, and Lecturer : Rs. 700-40-1100-50-1600-) plus dearness and other allowances and pensionary benefits according to the Statutes of the University.

A.	Professor of Sociology	One post
B.	Professor of Law	One post
C.	Professor of Library Science	One post
D.	Professor of Hindi	One post
E.	Reader in Sociology	One post
F.	Reader in Law	One post
G.	Reader in Hindi	One post
H.	Reader in Industrial Relations and Personnel Management	One post
I.	Reader in Chemistry	One post
J.	Reader in Botany	One post
K.	Reader in Philosophy	One post
L.	Lecturer in English	One post
M.	Lecturer in Chemistry	One post
N.	Lecturer in Botany	One post
O.	Lecturer in Zoology	Two posts
P.	Lecturer in Hindi	Two posts
Q.	Lecturer in Foreign Languages (German)	One post

Minimum Qualifications

For Professorship

An eminent scholar with published work of high quality actively engaged in research. About ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

For Readership

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that at least three of these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record of Teaching/Research.

For Lectureship

(a) A Doctorate's degree or research work of an equally high standard; and

(b) Good academic record with at least Second Class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Desirable Qualifications : Specialisation or Proficiency

For A: Any branch of the subject.

For B : Any branch of the subject.

For C : Any branch of the subject.

For D : Any branch of the subject.

For E : Any branch of the subject.

For F: Any branch of the subject.

For G: Any branch of the subject.

For H : Personnel Management/Industrial Relations/Organisational Behaviour/Labour Laws.

For I : Any branch of the subject.

For J : Ecology—Control of aquatic weeds/environmental conservation.

For K : Existentialism/Theory of knowledge/Psychology (Candidates with specialization in psychology must be M.A./M.Sc. in Psychology).

For L : American Poetry/ELT (Methods & Materials)/Ancient European Classics/Principles of Literary Criticism.

For M : Theoretical Chemistry/Physical Organic Chemistry/Photochemistry.

For N : Palaeobotany and Palynology/Algology/Plant Ecology/Taxonomy of Angiosperms.

For O : **For the first post :** Fishery.

For the second post : Parasitology/Cytogenetics/Cell Biology.

For P : Any branch of the subject.

For Q : Any branch of the subject.

The University Council may, on recommendations of the appropriate Selection Committee, waive any of the requirements in view of the candidate's specialised knowledge in the subject. The choice of the Committee may not necessarily be confined to those who apply formally.

For application form and other information apply to the Registrar with self-addressed stamped (60 paise) envelope (9″ x 4″).

Last date for submission of application with requisite fee of Rs. 5/- is **10th January, 1984.**

A.K. Chaudhuri
REGISTRAR

RAVISHANKAR UNIVERSITY

RAIPUR 492010

Addenda to Employment Notification No. 9 of 1983.

Last date of application extended upto 23rd Jan. 1984.

(I) Additions to specialization as made against each post is notified as under:

1. Reader in Anthropology: Desirable : Cultural and Biological aspects.

2. Lecturer in Anthropology : Desirable : any one of the following branches:

(a) Human biochemcal genetics.

OR

(b) Human Cytogenetics.

OR

(c) Human growth.

OR

(d) Human adaptibility.

3. Reader in History : Regional History preferably relating to Chhattisgarh area.

4. Reader in Statistics : Candidates having experience of research on Quantitative Linguistics or sampling or Design of Experiments will be preferred.

5. Lecturer in Bio-Science: The candidate should hold Master's Degree in Bio-Science.

6. Reader in Physics : Candidates possessing M.Sc./M.Sc. (Engg.)/M.Tech./M.E. degree with specialization in Electronics are also eligible.

(II) Applications are also invited for the post of Professor of Regional Studies & Research to coordinate research activities in the field relating to departments of Linguistics, Anthropology, Sociology, Psychology, Economics, Geography & History.

(III) The last date for receipt of applications is extended to **23rd January, 1984**.

Dr. H.N. Shukla
REGISTRAR

SHREEMATI NATHIBAI DAMODAR THACKERSEY WOMEN'S UNIVERSITY

Applications are invited in the prescribed forms available from the University Office, on payment of Rs. 5/- (by M.O./Indian Postal Order/in cash) for the post of PRINCIPAL, S.N.D.T. Arts & Smt. Champaben College of Commerce & Economics at the Churchgate Campus of the University at Bombay, so as to reach the undersigned not later than **January 15, 1984.**

Pay Scale

Rs. 1500-60-1800-100-2000-125/2-2500 plus admissible allowances (Total initial emoluments about Rs. 2644.75/- per month.)

Qualifications & Experience

(A) Doctor's Degree or research work of an equally high standard in one of the subjects under Arts or Social Sciences.

(B) A consistently good academic record at the Master's level with at least first or high second class or equivalent degree of a foreign University, in a subject under Arts or Social Sciences.

(C) About 10 years experience of teaching and/or research and about 5 years administrative experience at an educational institution or higher learning. The condition of experience may be relaxed in case of persons with higher research qualifications or other conditions the Selection Committee may find adequate.

Note

(1) Only suitable candidates will be called for interview.
(2) Scheduled Castes/Tribes and Other Nomadic Tribes candidates will be given consideration as per Govt. directives.
(3) Proficiency in Marathi/Gujarati essential, besides fluency in English.
(4) Higher starting salary may be considered in exceptional cases, if recommended by the Selection Committee.
(5) Accommodation on campus available.

Smt. K.H. Bhansali
REGISTRAR

UNIVERSITY NEWS

VOL. XXII **JANUARY 1**
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Price **Re. 1.00**

A Weekly Chronicle of Higher Education published by the Association of Indian Universities

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :
M.S. RAMAMURTHY

Information Service
20 JAN 1984
C.F.T.R.I. MYS

University News Becomes A Weekly

University News becoming a weekly, which hitherto has been published as a fortnightly, is no doubt an event of significance. To those involved in the production of University News this is a matter of great pride. The Association of Indian Universities is convinced that there is plenty of scope for disseminating, on a weekly basis, news relating to higher education in this country and news of relevance from abroad on higher education. This will be rendering a service to those involved in the planning and implementation of policies and programmes in higher education in this country. It is in this spirit that University News becomes a weekly with effect from this issue of January 1, 1984. The dates of publication have been decided to be 1, 8, 16 and 23 of each month.

While deciding on conversion of University News into a weekly the Association is fully conscious that it should not allow any deterioration in standards with reference to both content and production. On the contrary this should impel us to conscientiously and consistently strive for improving the journal. We do hope that subscribers and readers of this journal appreciate the efforts being made in this behalf and would encourage us in the venture. While we are continuously thinking of ways of providing more information and views, one new feature which we would like to introduce is a 'Letters to the Editor' column. You, dear Reader, may like to contribute to this column.

For the survival of a weekly two factors are of major concern. There is a need for a greater involvement of the university and college system and the academics with University News. That involvement primarily would be in the shape of feeding the Editor with news being generated continuously all over the country within the system of universities and colleges. It hardly needs to be emphasised that exchange of information is a means of exchange of thoughts and ideas for a nobler and a better outcome. Also, University News welcomes articles from academics on matters relating to higher education. The second important factor is that a weekly survives by the income that it gets. Such income, in the case of the AIU, is not of the profit making variety. The venture has to be self-sustaining. Towards this end it is necessary that more and more universities, colleges and academics subscribe to University News. Also it is necessary that more and more institutions use the medium of University News for advertising. As the venture is intended purely as a service in the field of higher education the subscription rates, as also the advertisement rates, have deliberately been kept low. Details can be found elsewhere in the issue. One other feature that has been introduced is a concessional rate of subscription for academics and students. We sincerely hope that everyone concerned would make full use of the opportunity thus being made available by University News.

Wishing every one of you a very Happy New Year.

1-1-1984 **—Editor**

71st Session

Indian Science Congress

From all accounts Ranchi, the venue of the 71st Session of the Indian Science Congress, is all set for the great event. The Congress will be held at the campus of the Birla Institute of Technology at Mesra which is about 15 km. from Ranchi city. A huge pandal has been put up which can accommodate between six and eight thousand people. The Congress will be attended by nearly 2500 delegates of whom 30 are expected to be delegates coming from abroad.

The Congress itself will be preceded by a number of conferences. Several of these conferences are expected to be the annual conferences of the various societies in specialised disciplines like Anthropology, Genetics, Mathematics, Zoology, Experimental Hypnosis, etc.

The Indian Science Congress, as in the past, will be inaugurated by the Prime Minister of India. The inauguration is scheduled for January 3, 1984. The General President of the Congress is Prof. R.P. Bambah, Sr. Professor, Deparment of Mathematics, Panjab University, Chandigarh.

Ram Prakash Bambah was born on 30th September 1925 at Jammu. After school education at Wazirbad and Sialkot, he went to Government College, Lahore. He stood first in the Panjab University in F.A., B.A., B.A. (Hons.) and M.A.—in the last examination he secured 600 marks out of 600 —a record unequalled in the history of the University.

After a brief spell as a Research student of Professor S. Chawla, he joined Delhi University as a Lecturer (in a leave vacancy) in the Physics Department. In 1948 he proceeded to St. John's College, Cambridge as an 1951 Exhibition Scholar. He received his Ph.D. in 1950 under the supervision of Professor L.J. Mordell. He spent the year 1950-51 at University College, London. During this year he wrote joint papers with H. Davenport, C.A. Rogers and K.F. Roth.

Bambah returned to India in 1951. Unable to find a job, he applied to the National Institute of Sciences of India, who gave him a Research Fellowship for six months on an adhoc basis. In April 1952, he was almost simultaneously offered a Readership in the Panjab University, elected to a Fellowship of St. John's College, Cambridge and appointed a member of the Institute for advanced Study, Princeton. On his assurance that he would eventually like to work in India, Diwan Anand Kumar, Vice-Chancellor, Panjab University at the time, gave him leave for two years immediately after joining the University. He spent these two years at Princeton and Cambridge. In 1954 the Panjab University started postgraduate classes in the Mathematics Department consisting of only two members—Professor H. Gupta and Dr. R.P. Bambah. This department is now recognised as an advanced Centre by the UGC. Bambah became a Professor in 1958. He obtained the Sc. D. degree of Cambridge in 1970 on the basis of his published work. He was elected to a Fellowship of the Indian National Science Academy in 1955.

R.P. Bambah

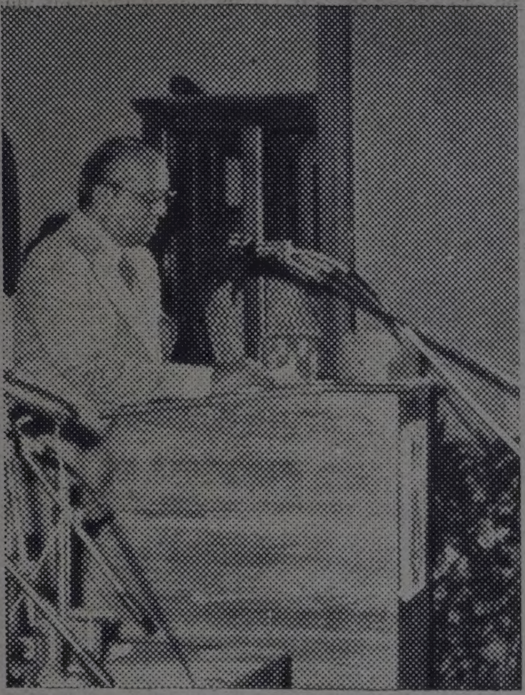
Bambah has to-date written sixty-one papers and the theses of his students have resulted in twenty-four other papers. The work of his school has had an impact on the work of many mathematicians all over the world. He has been invited to participate in and preside over session of various conferences in Number Theory and Discrete Geometry in U.S.A., France, Hungary and Oberwolfach. He has given lectures at leading institutions in U.S.A., Canada, U.K., Germany, Hungary and India. He has collaborated with mathematicians in India, U.K. and U.S.A.

He visited U.S.A. as an NSF Lecturer for summer schools in 1960 and as a Visiting Professor at Norte Dame University in 1957-58. He was a regular Professor at Ohio State University from 1964 to 1970 and has frequently worked as a Visiting Professor there since then. He was a UGC National Lecturer in 1971 and a UGC National Fellow from 1973 to 1975. He is a recipient of the Srinivas Ramanujan Medal of the Indian National Science Academy.

Bambah has been Editor, Indian Mathematical Society and member, Board of Editor, Indian Journal of Pure and Applied Mathematics. He has been one of the Editors of the Journal of Number Theory (published by Academic Press) since its inception. He has been President of the Mathematics Section of Indian Science Congress and was President of the Indian Mathematical Society in 1969-70. He is a Fellow of all the three National Academies: Indian National Science Academy (F.N.A.), Indian Academy of Sciences (F.A.Sc.) and National Academy of Science of India (F.N.A.Sc.).

He was a member of the first UGC Review Committee on Mathematics and convener of the Indian Steering Committee for the Binational Conference on Mathematical Education and Research. He was a member of the Gajendragadkar and Sen Committees on the Governance of Universities. He served as a member of the University Grants Commission from 1976 to 1979. He is currently a member of the Punjab Education Reform Commission and the National Commission on Teachers. □

59th Annual Meeting of Association of Indian Universities



Prof. S.V. Chittibabu : Welcomes

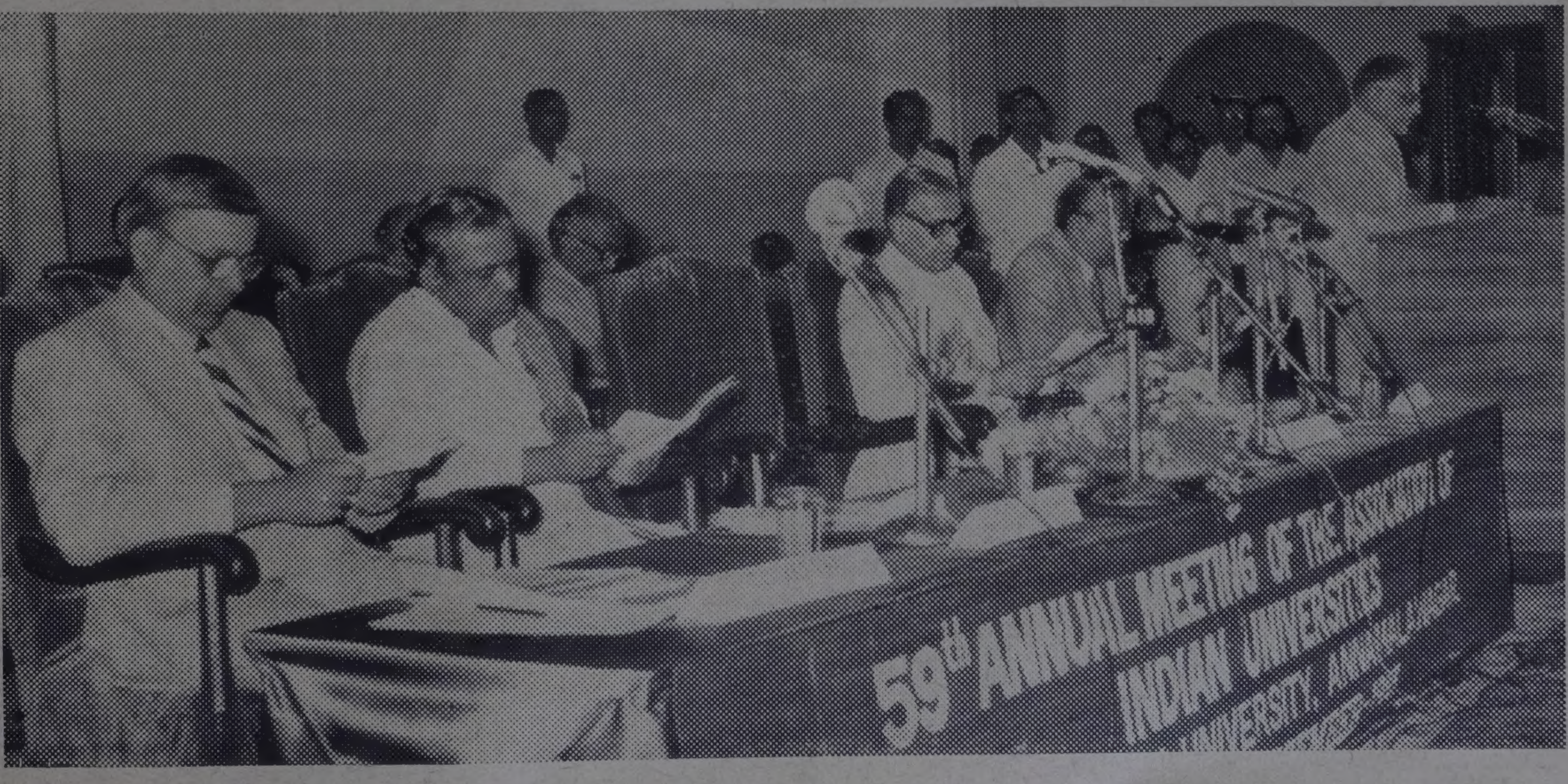
The 59th Annual Meeting of the Association of Indian Universities (AIU) held at the Annamalai University from December 11-13, 1983, was a big success. Whether it was the glory of the temple town of Chidambaram or the invitation letter sent by the host Vice-Chancellor, Prof. S.V. Chittibabu, to the Vice-Chancellors which brought together 56 Vice-Chancellors, it is difficult to say. Dr. A. Christodoulou, Secretary General, Association of Commonwealth Universities (ACU) London, Mr Tom Craig, Assistant Secretary General, ACU, Dr. G.A. Allana, Vice-Chancellor, Allama Iqbal Open University, Pakistan and Dr. Z.R. Siddiqui, Vice-Chancellor, Jahangirnagar University, Bangladesh also attended the meetings.

The campus of Annamalai University presented a lush green environment with colourful banners and welcome signs and the hospitality of the university matched the setting. The arrangements made by the university were excellent and the delegates did not feel any strain with a rather busy schedule of meetings and functions.

Apart from the General and Domestic Sessions of AIU, there were two Seminars, one on "Distance Education and its future through new communication technologies" and the other on "Extra and co-curricular activities in colleges and universities". These sessions were preceded by meetings of various AIU sub-committees. High class dance and music programmes were organised in the evenings of the three-day business schedule.

The discussions in the seminars and in the other meetings, going by reports, were illuminating. For the seminar on "Distance Education and its future through new communication technologies" the following papers were discussed :

1. "Open Education system in India—Its place and potential" by Dr. G. Ram Reddy, Vice-Chancellor, A.P. Open University, Hyderabad.
2. "Distance Education and its future through new communication technologies" by Dr. (Smt.) Jyoti H. Trivedi, Vice-Chancellor, SNDT Women's University, Bombay.
3. "Information communication technologies and opening out the universities" by Dr. R G. Takwale, Vice-Chancellor, University of Poona, Pune.
4. "Distance Education and its future through new communication technologies" by Dr. R. Subbayyan, Vice-Chancellor, Bharathiar University, Coimbatore.
5. "Distance Education—Some trends and problems" by Dr. S. Bhatnagar, Direc-



Shri S.L. Khurana, Governor of Tamil Nadu, delivering the Inaugural Address tor, Correspondence Courses, Panjab University, Chandigarh.

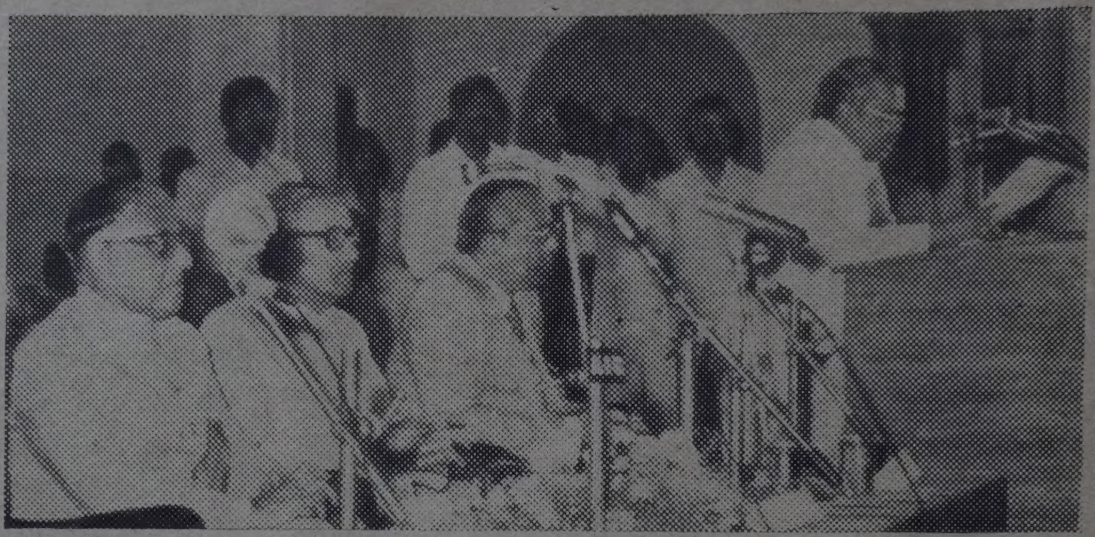
6. "Distance Education and its future through new communication technologies" by Prof. Bakhshish Singh, Director, Correspondence Courses, Punjabi University, Patiala.

Discussion centred round the concept of distance education, need for effective communication and improving the quality of such communication. Some speakers spoke about the precautions that needed to be taken in the use of the modern technological devices and the scope for distance education in India. Prof. R.C. Paul, President of AIU, suggested setting up of Task Force for in depth study of the basic concepts of distance education and ways and means of developing such education in all universities.

For the seminar on "Extra and Co-curricular Activities in the colleges and universities" the participants were :

1. Dr. M. Aram, Vice-Chancellor, Gandhigram Rural Institute, Madurai.
2. Dr. L.P. Sinha, Vice-Chancellor, Himachal Pradesh University, Simla.
3. Principal K. Bhagishayana, Vice-Chancellor, Shivaji University, Kolhapur.
4. Dr. M.D. Tawade, Director, Students Welfare Board, Shivaji University, Kolhapur.
5. Dr. N.K. Chandiramani, Director, Students Welfare, Haryana Agricultural University, Hissar.
6. Dr. K.G. Ranga Raju, Dean of Students Welfare, University of Roorkee, Roorkee.
7. Department of Sports, Government of India.

Dr. Jagdish Narain, Secretary, AIU : Vote of Thanks



Shri C. Aranganayakam, Education Minister of Tamil Nadu, delivering the Key Note Address

In this seminar, various aspects of co-curricular activities were discussed and there was a general feeling that physical facilities for sports and games need to be considerably augmented. The number of tournaments and competitions in games and sports need to be increased. The extra curricular activities would also need to be integrated with the curriculum. General A.M. Sethna Chairman, ITDC said that different extra curricular activities should not be considered as isolated activities. He said greater attention should be paid to motivating students into participation in such activities and suggested preparation of specially tailored courses in general education for the benefit of sportsmen, many of whom may not be able to show academic excellence.

At the Domestic Session, the following universities were granted provisional membership of the Association:

1. Kumaun University, Nainital.
2. Mangalore University, Mangalore.
3. Sri Sathya Sai Institute of Higher Learning, Prasanthinlayam.
4. Vidya Sagar University, Midnapore.
5. C. S. Azad University of Agriculture & Technology, Kanpur.
6. Gulbarga University, Gulbarga.
7. Indian Institute of Science, Bangalore.
8. Indian Statistical Institute, Calcutta.
9. Sri Chitra Tirunal Medical Centre, Trivandrum.
10. Narendra Dev University of Agriculture & Technology, Faizabad.
11. Amravati University, Amravati.

Maharshi Dayanand University, Rohtak and Avadh University, Faizabad were admitted to the regular membership of AIU.

The next Annual Meeting is scheduled to be held in the Eastern Zone and the invitation of North-Eastern Hill University, Shillong, was accepted for hosting it.

Prof. M.S. Gore, Vice-Chancellor of Bombay University was elected President for one year with effect from April, 1984. □

9th ANNUAL MEETING OF THE ASSOCIATION OF INDIAN UNIVERSITIES
at ANNAMALAI UNIVERSITY, ANNAMALAINAGAR.
10th TO 13th DECEMBER 1983.

Poona University's Seminar on New Technologies in Higher Education

The University of Poona under the joint auspices of University Grants Commission and the Association of Indian Universities is holding a seminar on New Technologies in Higher Education from January 9 to 11, 1984. Dr. (Mrs) Madhuri R. Shah, Chairman of the UGC is expected to inaugurate the seminar. The University of Poona has invited several academics and representatives of other agencies to contribute papers for the purpose. Besides, Dr, W.H. Anders, Director, Audio-Visual Media Centre, University of Essen, Federal Republic of Germany is also expected to participate in the Seminar and deliver lead-lectures.

The topics/areas proposed to be covered in the seminar are the following :

(A) Technologies of information communication (like Audio-visual, Video, Computers etc.) and their importance in Higher Education.

(B) Utilization of modern technologies in the formal university education.

(C) Modern technologies in extension and non-formal education (continuing education, distance education and the like).

(D) Adoption and integration of new technologies in the present higher educational pattern in Indian Universities—difficulties and possible solutions.

(E) Information Communication Network and changing role of Educational Institutions.

A theme circulated to invitees gives a general background of the seminar and the broad extent of the above mentioned topics are expected to be discussed in the seminar. These are :

— Many are not aware of the entire spectrum of hardware as part of the new technologies now available. Also while everyone of these has potentialities, there are certain limitations too. Speakers would formulate their ideas with particular reference to the new technologies, its nature and potential.

— The co-ordination required in the preparation of courseware in the form of script, format for production, filming and editing etc.

— Discuss the advantages and disadvantages of each method as an effective tool for learning at a distance.

— The strategy as regards courseware, hardware, manpower and finance in the context of the existing situation and education patterns.

— The guidelines has also spelt some relevant issues for education in the context of new technology and learning in future. These are:

* To what extent these technologies be allowed to become specialized, powerful (hardware and software) and educationally in command that they can control the entire direction of future education?

* To what extent the present educational institutions need to change so as to play an effective role without blindly accepting the belief that technology is the key to formal or non-formal learning?

* To what extent should one depend upon imported curriculum material for learning so as not to promote dependence on outside resources for our own development?

* To what extent will these new technologies promote redefinition of traditional cultural values, ideals and interaction patterns in the Society?

* To what extent the anticipated fast obsolescence of these technologies (because of high speed of research in the west) is going to affect the economics of the entire adoption of them in the educational system? ☐

Task Force on INSAT-1B Meets

A meeting of the Task Force set up by the Association of Indian Universities on utilisation of INSAT-1B for higher education was held last month. Prof. R.G. Takwale, Vice-Chancellor of Poona University and Chairman of the Task Force presided. The meeting of the Task Force was attended by Prof. K.S. Karnik of Space Applications Centre at Ahmedabad, Dr. Ashok Chandra of the Department of Electronics of the Government of India, Prof. Yash Pal of the Planning Commission, Dr. P. Deshpande of the British Council, Shri R.S. Shastri, Director of Delhi Doordarshan and Prof. V. Natarajan, Project Director, AIU.

Initiating the meeting of the Task Force, the Chairman after outlining the circumstances leading to the setting up of the Task Force, stated that the new technologies in higher education have had a deep impact on various aspects of social, economic and cultural life of the citizens besides its educational impact. Considering this he felt that teachers in universities should not merely become aware of these new technologies but also start using the new technologies.

Dr. Yash Pal of the Planning Commission emphasised the need for using the new technologies for upgrading the quality of life of the Indians of whom nearly 450 millions were illiterate. In this behalf he wanted that instead of adopting the western models India should solve its problems keeping in mind the constraints and restraints peculiar to the country. Such technologies, he observed, must serve our requirements and should not dictate their adoption.

Dr. Karnik of the Space Applications Centre pointed out that the present state of the art in the country is nothing more than appropriate packages of information, both broadcast and non-broadcast. He felt that the different modes would need to be integrated.

Dr. Ashok Chandra of the Department of Electronics stated that already 250 schools in the country had computers and that the Department of Electronics was providing them with the training in the use of these computers in the same way as telephones are being used by them. After this pilot project was successful, he said that the 7th Five Year Plan would involve a larger number of schools in the use of the computers. He further felt that a fundamental question of what information is to be conveyed and to whom such information is to be conveyed has to be decided by AIU before initiating any plan of action.

Dr. Deshpande of the British Council pointed out certain limitations in the contex of the Indian situation, viz., the absence of proper script-writers, programmers and technicians which should limit the ability to effectively plunge into an immediate action programme to produce the needed software.

Mr. Shastri, Director of Delhi Doordarshan felt that T.V. was a powerful medium and availability of one hour through INSAT-1B for telecasting should be properly utilised.

After discussions the Chairman summarised the proceedings as follows:

(1) Instead of adopting models from the west, efforts must be made to evolve slutions to our own problems and factors like economic backwardness and reaching large masses of people may be kept in mind.

(2) Pilot programs at 4-5 places with decentralised approach be conceived. One or some of the Information and Broadcasting transmitters to transmit programs of local relevance be taken up. Micro-networking be established with information creation linked to network and dissemination. (Principles of decentralisation, relevance to disadvantages—masses equality).

(3) For teaching 'packages' be prepared and disseminated through broadcasting as well as non-broadcating mode. 'Library storage and transmission/dissemination' be established. Many institutions be involved in this program.

(4) First, areas of applications/usage must be identified and then suitable technology be identified. What to convey should be known first than how to convey.

(5) Large scale, soft-ware prodution should be ensured through orientation etc. However, preparation period should not delay our activities. Since ready-made training programs to train persons for our requirements are not available, active participation must be encouraged.

(6) Maintenance would pose a big problem. Training for this be started on large scale. Since technicians have to work in rural or interior places, multiple skills be given to sustain themselves.

(7) For higher studies research in Universities, a network be prepared with storage—transmission facilities. (data-networking for PG - research)

(8) Universities should undertake studies and Research and Development work in development of technology suitable to our needs besides studying the new technology that is getting evolved for future development.

(9) 'Computer Literacy' be spread.

(10) In all the networking broadcast as well as non-broadcast modes be developed.

At the next meeting of the Task Force it was agreed that details regarding communication requirements and also hardware and software availability would be discussed. ☐

New Secretary UGC announced

Prof. S.K. Khanna, Dean of Development & Planning and Head of the Civil Engineering Department, University of Roorkee will take over as the new Secretary of the University Grants Commission.

Prof. Khanna has earned international fame as an eminent Professor of Transportation Engineering. As Dean, he has been responsible for the planning and development of the University of Roorkee, which is a prestigious technical university of the country.

"University News" congratulates Prof. Khanna on this prestigious appointment in the service of the Indian Universities.

UNIVERSITY NEWS

WISHES

Its Readers

A

HAPPY NEW YEAR

Shri Jha Addresses Convocation of Roorkee University

Excerpts from the convocation address delivered by Shri L. K. Jha, Chairman, Economic Administration Reforms Commission at the University of Roorkee on 26th November, 1983.

Convocation

"... The nation is engaged in a tremendous developmental effort. More and more projects are taken up each year. Their successful execution depends on the talent and dedication of our engineers. The contributions which our engineers have made to develop in different sectors is truly impressive. The industrial plants they have commissioned have led to the expansion and diversification of all our industries, not just engineering industries but also chemical, metallurgical, mining and transport industries. The dams they have constructed have provided water to the farmers, reducing their dependence on the monsoons. Engineers have also played a key role in the development of our space programme, our exploration of the Antartic region and in other fields where India alone, among the developing countries, has a high profile. Last but not the least, engineers constitute an important limb of our defence forces, making good use of their special skills in the task of protecting the integrity of India from external threats of all kinds which regrettably seem to be on the increase.

"Great as the contribution of engineers in their own fields of specialisation is, I feel they have and should play an even wider role in our national life. They should not only engage themselves in the building of projects but also get involved in nation-building. Lord Mountbatten had referred to Mahatma Gandhi as the architect of India's freedom. This metaphor brought out admirably the essential similarity between nation building and project building. In both operations, diverse elements—sometimes inimical to each other—have to be brought together to constitute an integrated purposeful and strong entity that can withstand all stresses and strains, internal and external. Mahatma Gandhi had welded the diverse elements in India, the Hindus, Muslims, Sikhs, Christians and the tribal population, people who spoke different languages and lived in different parts of the country with different social traditions into a united, resolute nation. Its demand for freedom could no longer be resisted. India emerged as the world's largest democracy.

"We can be truly proud that while in many developing countries, near and far, democracy has been displaced by dictatorship, in India it is a vibrant reality. But we cannot take it for granted. Unless we can eradicate mass poverty, democracy will remain in danger.

"Ever since independence, we have been engaged in another struggle for freedom, to bring to our people freedom from want, freedom from poverty. We have, no doubt, made good progress despite tremendous odds. But we have still a long way to do. In the fight against poverty, engineers have a tremendous contribution to make, not only in the execution of projects and programmes but also in bringing new ideas, new approaches, new techniques into play.

"The other day, addressing the silver jubilee function of the Institute of Economic Growth in Delhi, the Prime Minister invited economists to come forth with their thoughts and ideas about the kind of Seventh Plan we should have, what should be its content and its priorities. This is an exercise in which, I feel, engineers have a special contribution to make. They are trained to be builders, and one of the qualities which builders, particularly in a poor community, must have is the ability to economise in materials. Those few who cater to the rich alone can, of course, afford to be lavish with the use of scarce, costly materials and build magnificent premises, which are the status symbols of the affluent and the eye-sore of the rest of the community. But if we remember that the prime task of development must be to raise the living standards of the poor, then we must always think of ways in which we can economise in the use of scarce materials to eliminate waste and put what goes as waste to a constructive purpose. This is a task which engineers alone can perform.

"For engineers to contribute to such a nationwide endeavour, they must assume a more active role than they have. I have already paid a tribute to the contribution which they have made to India's economic development. But in the main their role has been somewhat passive. They have executed the works entrusted to them with care and competence. They have had less say in deciding what projects should be taken in hand. I know, there will be no dearth of opportunities for engineers to be employed by others. I feel, they should also give serious thought to the possibility of becoming employers in their own right. This would mean engineers turning into entrepreneurs, studying the emerging demands in the country for various goods and services, and taking the initiative in setting up enterprises which will satisfy them and create more employment in the process.

"In recent years, there has been a trend for engineers after qualifying themselves as such going in for a course in management. Quite frankly, I have not viewed this trend with any feeling of enthusiasm. I have a suspicion that it reflects a sub-conscious preference which we as a people unfortunately seem to have for desk jobs as distinct from field jobs. Management, of course, has an importance of its own. But one does not need to be an engineer in order to be a manager. The skill of an engineer is much better utilised in activities which are truly creative which result in concrete achievements in the shape of new lines of production coming into being. These decisions have traditionally been taken by people who are variously referred to as industrialists or entrepreneurs, largely for the reason that they have had at their disposal or been able to mobilise ample resources to invest in new undertakings. Yet the moment they decide to do so, they have to rely on engineers to transform their ideas into reality. The thought I am putting forward is that with so many financial institutions ready to help young entrepreneurs, particularly those who are educated and technically qualified, to start a business of their own, more and more engineers should start thinking in terms of starting their own lines of production.

"The most crucial decision in doing so is to select the product to be developed. Most Indian industrialists have tried to concentrate on products which are being imported. They know that the very fact that they are being imported mean that there is a demand for them. They have also taken for granted that once they start manufacturing the product in the country, they will receive ample protection from imports and that they can sell what they make even if their quality is not so good or if their costs are high. This trend has been strengthened by the understandable concern of Government to reduce the level of imports because of the paucity of foreign exchange which afflicts us.

"To take import substitution as the guiding principle of development is not as sound as it may seem at first sight. In saying this I am not giving any support to the idea of export-led growth of which there are many champions. There are people who tell us to follow the example of countries like Singapore which have undoubtedly achieved a great deal of prosperity by setting up industries which cater primarily to export demand. A strategy which suits an island economy cannot be equally beneficial for a continental economy like ours. We have a vast domestic market. It is true that because the people's incomes are low, most of them can barely afford to buy the basic necessities of life; only a few can go in for the vast range of manufactures which are in daily use of almost every family in more prosperous countries. Usually, when industries are set up on the basis of import substitution, they cater to a very small percentage of our total population who are able to afford imported goods. The production which is set up in India for the purpose is on a much smaller scale and, therefore, much costlier than goods produced abroad. The demand and the needs of the masses do not, therefore, get the attention they deserve.

"The thought that I am trying to project to you is that instead of being influenced by the volume or nature of imports, engineers should try to identify the products which, if available at reasonable prices, would have a mass market in India. Such opportunities were admittedly limited when we embarked on industrialisation. But today, thanks to the progress we have already made and the improvement in incomes which has been effected, things are different. The farmers get a far better price for the crop they produce. Industrial workers are earning more than ever before. With improved incomes they could buy more industrial products if they are of a nature to satisfy their tastes, their needs at prices they can afford. In the absence of such opportunities, they are content to go to the cinema — you see, how many new cinema houses are coming up everywhere — or to buy some jewellery for their family or to spend extravagantly on weddings and on festive occasions. Clearly, there is room for more industries to manufacture more products of a kind which improves their standard of living.

"A number of such products are already there for which a mass market has developed. While the demand for passenger cars, whose manufacture was taken up as a part of the import substitution programme, is still sluggish and with our low volume of production, costs are fantastically high, for bicycles a tremendous market has come into existence. When the first bicycle factory was being set up with foreign collaboration, there were miserably low estimates of demand and the fear was expressed that if imports are allowed, the domestic industry would die. However, the vast domestic market not only absorbed the production of each factory which was set up but led to a tremendous growth of production by others without any foreign collaboration and with the help of Indian engineers alone. Their quality is so good, their prices so low that far from being threatened by imports, they are able to export to the most developed countries. Something similar seems to have happened in regard to scooters for which there is a long waiting list of orders.

"These two examples but illustrate the point that provided the product has an appeal to the relatively low income groups, the demand will not be lacking. All that is needed is the capacity to identify such products and to engineer their production in a way that costs are kept low. In the selection of products whose domestic output needs to be stepped up, it is much more important to analyse the pent-up demand within the country and the rate at which it is likely to grow than to give an over-riding priority to import substitution on considerations of foreign exchange.

"Some of the most important needs of the people are of a nature that they cannot be met by imports. Let me cite some examples : we are desperately short of housing, particularly urban housing. Since we cannot import them, the shortage does not show up as a drain on our foreign exchange resources. I have a lurking suspicion in my mind that one reason why in our allocation of resources, housing has been getting inadequate attention is that it has no foreign exchange saving angle.

"Let me turn to another area. To meet our energy needs, we import oil. However we do not and cannot import power. In consequence, particularly since the increase in oil prices, we are making huge outlays on oil exploration. On the other hand, in the power sector there seems to be inadequacy of funds. Not only our new projects are being cleared somewhat slowly on account of paucity of resources, not enough attention seems to be given to the importance of improving the generation of power plants which have already been installed. A high proportion of them are working at less than 50 percent of their capacity. With relatively modest outlays, in terms of money and the deployment of better trained manpower, they can substantially augment their power generation and lead to higher industrial production all round.

"Similarly, the inconvenience to people and the damage to the economy on account of the poor quality and paucity of telephone services do not receive the notice they deserve, possibly because there is no visible loss of foreign exchange in making up the domestic shortfall by imports. I have not the slightest doubt that we have within the country the competence and ability to make our telephone systems perform better. All we need is the will and determination to tackle the problem on a war footing.

"The examples I have given are all of a type in which greater involvement of engineers is needed. Engineers can help to lower the cost of construction of housing, which is one of the major obstacles, which people face when they think of building a house. Engineers can set up new traditions and standards which would eliminate the somewhat extravagant use of materials like cement and steel, which is accepted without question. Engineers can also help to improve the power situation and the functioning of telephones.

"To put it briefly, there is great need to increase the involvement of engineers in our development process-not just in the construction phase or in the running of industrial plants but also in identifying priorities, in overcoming the shortage of resources by achieving economy in the use of materials, and in improving the maintenance and performance of installed equipment: I would very much hope that the authorities will give due recognition to the role which engineers can play. At the same time, to engineers I would say that instead of trying to find themselves gainful employment as managers or administrators, they should think in terms of playing an entrepreneurial role in industry, so that instead of seeking employment, they may be creating employment in the country..."

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CIEFL Organises Seminar on Teaching of Russian

The Department of Russian, Central Institute of English & Foreign Languages organized a Workshop-cum-Seminar on "The Teaching of Russian and the Production of Teaching Materials". 35 participants including Soviet teachers of Russian working at various Indian Universities and educational institutions attended the Workshop-cum-Seminar which was conducted within the framework of cultural exchange programme between the CIEFL and A.S. Pushkin Institute of Russian Language.

Dr. L.B. Trushina was specially deputed by the A.S. Pushkin Institute of Russian Language to conduct this Workshop-cum-Seminar. The other two guests, who specially came from the U.S.S.R. to this Workshop-cum-Seminar, were S.I. Sokhin, Deputy Director, A.S. Pushkin Institute of Russian Language and Ms. A.I. Borisova, Chief of the Russian Language Teaching Cell (Department), Ministry of Higher and Secondary Specialized Education, USSR.

The Workshop-cum-Seminar was inaugurated on 6th October 1983 by Professor Ramesh Mohan, Director, CIEFL. Professor Ramesh Mohan while stressing the significance of such Workshops and Seminars underlined also the necessity for a co-ordinated effort at the national level to produce teaching materials in Russian based on the Indian situation and needs. He also promised that the CIEFL will extend all its expertise and cooperation in such an effort at the national level.

Earlier Professor J.P. Dimri, Head, Department of Russian, CIEFL welcomed the participants, introduced the guests from the Soviet Union and acquainted them with the academic activities of the Department.

At the inaugural session the participants were also addressed by S.I. Sokhin, who after highlighting the academic activities of the Pushkin Institute and the role of teaching materials in the teaching of Russian assured a fruitful co-operation of the Institute with the Indian teachers of Russian.

At the Workshop-cum-Seminar there were: (1) Talks by the Soviet guests S.I. Sokhin and A.I. Borisova, (2) Workshop conducted by L.B. Trushina and (3) Papers and reports by the Indian teachers of Russian. The talk by S.I. Sokhin was on the teachers and the teaching materials in the process of "teaching Russian as a foreign language", in which he reiterated that the Pushkin Institute will extend all its support to the teachers of Russian in India in their academic activities. In the lecture which followed, A.I. Borisova from the USSR Ministry of Education made a comprehensive survey of not only the existing facilities in the Soviet Union in the field of Teaching Russian as a Foreign Language, but also the Indo-Soviet collaborations in this respect.

The Workshop conducted by L.B. Trushina was devoted to an introduction to certain theoretical aspects of producing teaching materials on the one hand, and a discussion of some practical problems faced by the teachers producing such materials on the other hand. The topics introduced and discussed at the Workshop were: (1) The communicative aspect as the most important aspect of the present day methodology of teaching a language—Teaching of Russian as a foreign language; (2) The modern textbooks and what and how it should be; (3) Need for nationally oriented text books; (4) Problems of text book production; and (5) The propagation and evaluation of a textbook.

The participants who found the workshop to be thought provoking, took active part by presenting reports at paper reading sessions. There were 10 reports in all. In addition to this, the Department of Russian organised a series of guest lectures by the senior members of the faculty of the Institute, who talked about the various problems of production of teaching materials and evaluation.

On the last day of the Workshop-cum-Seminar certificates were presented to the participants by Professor R.N. Ghosh, who also gave a valedictory address. He gave a historical survey of different methods of teaching foreign language, thereby underlying the merits of each one of them and at the same time stressed the importance of not neglecting the interests and needs of the learners while selecting a particular methodology for teaching a particular course.

The Department proposes to bring out in the form of a book the Proceedings of the Workshop along with the synoptic outline of guest lectures presented.

Refresher course on teaching of Political Science & research methodology

With the assistance of the University Grants Commission, the Department of Political Science of Gauhati University organised a refreshers course for college teachers on teaching of Political Science and Research Methodology. This was held from 18th October till 9th November, 1983.

The main objective of the course was to give the participants (1) some understanding of the various procedural and methodological aspects of social research thereby enabling them to undertake research studies; (2) to acquaint them with the art of modern political analysis; (3) to orient them to the new approach of studying different subjects within the framework of the discipline of the political science; and (4) to provide opportunities for generating a climate of academic partnership for better teaching and research undertaking.

Besides 15 political science teachers from greater Gauhati, 35 teachers drawn from colleges affiliated to the Gauhati University participated in the Course. At the end of the Course, the participants were awarded certificates. Dr. J.M. Chaudhury, Vice-Chancellor, Gauhati University presided over the inaugural and valedictory functions. Shri S.C. Rajkhowa former Vice-Chancellor of the Gauhati University delivered the inaugural address and Shri C. Das former Registrar of Gauhati University delivered the valeditory address. Mrs S. Chaudhury distributed the certificates at the valedictory function.

The Director of the Course was Dr. D.P. Barooah

Osmania University's extension programmes

The Adult, Continuing Education and Extension Programme of Osmania University is in for a big expansion. The UGC has approved a proposal which would increase the number to 490 Adult Education Centres involving 63 colleges spread over ten districts in Telangana area under Osmania University jurisdiction. Out of this, 190 centres will be exclusively for women learners. Last year there were 150 adult education centres under the University.

The Adult Education Programme was started in Osmania University in 1978 with 160 centres and has done pioneering work by publishing teaching/learning material for adults which is used by all the Universities in the State. Removal of Adult illiteracy is given due importance under the Prime Minister's 20-Point Programme. From this year, the Programme has undergone a change by including extension component.

According to Dr. V.S. Acharya, Director of Centre for Adult and Continuing Education and Extension, Osmania University, vocational programmes to benefit women and weaker sections will also be taken up to provide additional income. According to UGC guidelines, he said the programme will be implemented in two phases, the first upto March 31, 1985 and the second phase upto 1990.

Centre for research in microprocessor applications inaugurated at Cochin Varsity

Prof. (Dr.) P.V. Indiresan, Director, Indian Institute of Technology, Madras, inaugurated the Centre for Research in Microprocessor Applications in the Cochin University recently.

In his inaugural address Prof. Indiresan stressed the importance of "Signal Processing" in modern electronic fields like communication, radar and sonar. Highlighting the recent developments in 'Signal Processing', Prof, Indiresan said that the ultimate aim of signal processing was to take a final decision "yes" or "no" about a target's presence, position, direction etc.

The Centre for Research in Microprocessor Applications is fully supported by the Ministry of Education and Culture, Government of India, under a scheme of providing substantial grants to universities for promoting research and development activities in emerging areas.

Dr.K. Gopalan, Vice-Chancellor presided over the inaugural function.

Osmania University's observatory

Prof. Rais Ahmad, Vice-Chairman of the UGC, suggested that the Rangapur Observatory of the Osmania University be turned over as a National Centre for effective use. He said the biggest observatory with 48-inch telescope could be used by more scientists and as an autonomous body it could draw the best from all over the country.

Prof. Rais Ahmad recently inaugurated the Platimum Jubilee Symposium of Nizamiah Observatory and the ninth meeting of the Astronomical Society of India (ASI). He said the UGC is thinking of setting up of a National Centre for Astronomy and astrophysics.

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, who presided thanked all those who were responsible for making the Nizamiah Observatory possible and the excellent work it has done in the last 75 years. He hoped a National Centre would be soon set up.

Prof. S.M. Alladin, Director, Centre of Advanced Study in Astronomy, Osmania University, in his report said the Department had done pioneering work exploring the galaxy and recording the maps of eight lakh stars. Prof. R.V. Karandikar released a souvenir brought out for this occasion.

Prof. Rais Ahmed inaugurated the new building of the Nizamiah Observatory on the campus. An Astronomical Exhibition was also inaugurated by Prof. J.C Bhattacharya, Vice-President, ASI.

Professional courses at SNDT mooted

The Tata Consultancy Services (TCS), it is stated, has submitted a report to the Governor of Maharashtra indicating that the SNDT Women's University in Bombay should conduct professional courses which cater for the uplift of women. Evaluation should be treated as a feedback and no restriction on the time taken for completing a course should be placed on women. This suggestion has been made by TCS in the context of the social problems faced by women.

The report has further suggested that general courses should be conducted only through correspondence. These courses should be designed to focus on the woman learning in her natural environment which is the home.

VI Plan proposals of Panjab University

The University Grants Commission has sanctioned as many as 42 additional teaching posts, besides allocation for the library books and journals, purchase of equipment and construction of residential buildings, as part of the VI Plan developmental proposals of the Panjab University. The total assistance provided for the plan projects amounts to Rupees one crore. The University Grants Commission has also provided assistance to the University for establishing an Archival Cell as also for Legal Service Clinics.

The recommendation of the Board of Finance providing a sum of Rs 8 lacs for the construction of Youth Welfare-cum-Sports Hostel on the Campus, for the use of students and sportsmen from various colleges affiliated to this University, has been approved.

Kitchenette hostel at Karnatak Varsity

The construction of a Hostel for Boys with Kitchen facilities on Karnatak University Campus, Dharwad was taken up recently.

The strength of Hostel is 40 students with single rooms with Toilet and Kitchen facilities with a living area of 70 Sq ft. The Estimated cost of the Hostel is Rs 3,96,000/- The Hostel should be completed in all respect by 28-5-1984.

Workshop on project guidance and evaluation

Bharathidasan University has introduced Project/Dissertation work as an integral component of all the Under-Graduate and Post-Graduate courses in order to 'link the world of learning with the world of work and life', i.e. to provide opportunities to the learner to apply the knowledge acquired to 'real-life problems'.

To acquaint the teachers with the main features of 'Project Work' a Workshop on Project Guidance and Evaluation was conducted from 29th September to 1st October, 1983, in collaboration with Gandhigram Rural Institute, Gandhigram and Technical Teachers' Training Institute, Madras.

About 110 participants including Principals of various colleges of this University area were involved in the Workshop held at Jamal Mohamed College, Tiruchirapalli.

The University proposes to consolidate all the workable suggestions (i.e. Projects identified in subjects by each group, project-briefs prepared individually by participants and the assessment scheme for the project evolved by the groups) and all other recommendations made by the participants of the workshop. As a follow-up a "Manual on Project Guidance and Evaluation" is to be brought out shortly.

Tolkaappiam Fellowship

Dr. V. Sp. Manickam, Ex-Vice-Chancellor of the Madurai Kamaraj University, was awarded the Tolkaappiam Research Fellowship in a function got up at the Tamil University recently. Muthamizhkkavalar K.A.P. Viswanatham presided over the function. Dr. V.I. Subramoniam, Vice-Chancellor of the Tamil University explained the aims and objectives of this fellowship.

Research in Panineeyam has helped the popularisation of Sanskrit in the west. So also a detailed research in Tolkaappiam, will make the scholars around the world to appreciate the salient features of Tolkaappiam in particular and the Tamil Language in general. The Fellowship is for a period of two years. It will be given alternately to a scholar in India and in the succeeding term to a foreign scholar.

Course in rehabilitation science at Bharathidasan Varsity

The Christoffel Blinden Mission (CBM), a West German organisation devoted to the service of the handicapped, has sponsored a para-professional B.Sc. Degree course in Rehabilitation Science, the first of its kind in India, started by Bharathidasan University, Tiruchi, and offered in Holy Cross College, Tiruchirapalli from this year. This course aims to provide the basic knowledge on all aspects of rehabilitation, with specialisation in the rehabilitation of the mentally retarded and the physically handicapped. Dr. Jenane R. Kenmore of the C.B.M. is the Honorary Consultant to the Bharathidasan University regarding this course.

Joint research projects at Cochin University

The Scientific Adviser to the Defence Minister, Dr. V.S. Arunachalam, who visited Cochin University, recently disclosed that the Defence Research Establishments proposed to have joint research projects with the University.

Dr. Arunachalam had detailed discussions with the various research groups in the University

VI World Book Fair Special

February 1, 1984 issue of 'University News' will be published as a Special Number to mark the VI World Book Fair being organised in Delhi by the **National Book Trust—India** from February 4-14, 1984. It will contain commissioned articles on book world and will be extensively mailed in India and abroad. Last date for receipt of advertisements is **January 10, 1984.** For further details please contact:

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on some of the emerging areas in Science and Technology. He showed particular interest in some of the major ongoing research projects in the University in the areas of lasers and applied optics, microwaves and radar electronics, molecular spectroscopy, crystal growth and characterisation, and thin films.

Visitor in the Gurukula campus

Dr. Satyavrata Siddhantalankar, Visitor of the Gurukula Kangri Vishwavidyalaya addresseding a meeting of the staff and students of the Vishwavidyalaya recently reminded them that there was a time when Gurukula's objective was to produce the updeshakas and revolutionaries, but now the needs of the Society are different. Gurukula should now aim at producing real Scholars and pursue research work along with extension. The students by their worth and merit should try to attain the highest posts in the country.

At the end of the meeting Sri G.B.K. Hooja, the Vice-Chancellor thanked the Visitor for his kind visit to the University.

PAU holds seminar on Punjabi culture

"Europe is a great source for the identification of cultural heritage of Punjab", said Dr C.S. Chann, Director of International Research Institute of Punjabi Studies, London in a seminar held at the Punjab Agricultural University recently.

Dr Chann said that Punjabis residing in England had fought a long battle to establish their claim on all the antiques concerning Punjab in the British museum and the India Office Library.

He further told that the British Government was ready to hand over all the relics including the Kohinoor to any Punjabi association which could preserve these valuable antiques in England itself.

Dr Chann also exhibited many manuscripts in Punjabi, Persian and Sanskrit languages collected from European countries which give vital information about the ancient and medieval Punjabi culture.

The seminar on 'Cultural Heritage of Punjab' was organised by the Communication Centre of the University.

Refresher course on aspects of Indian history, culture and civilisation

The Faculty of History and Archaeology of Besant Theosophical Post Graduate College, Madanapalle (Andhra Pradesh) organised a refresher course on aspects of Indian History Culture and Civilisation. The Course Director was Prof. S. Sripathi Naidu.

Lectures were delivered by the academic staff of the Faculty on : Age of Civilisations, Age of Empires (North), Age of Empires (South), Delhi Sultanate (1206-1526), Mughal Empire (1526-1707), Early British Rule (1600-1857), Freedom Movement (1885-1947), Indian Art Through Ages, and A Study of Telugu Dynastics.

The Course was attended by teaching staff appearing for Civil Service Examinations and by students. It was organised as a part of COHSSIP programme of the University Grants Commission.

Social security measures in Karnatak University

The Karnatak University has established a Welfare Fund as a Social Security Measure in the interests of Casual Labourers working in the Garden and Engineering Departments of the University. Each such labourer is granted one day's paid leave on completion of 30 working days and his pay for that day treated as his contrtbution to the Welfare Fund. The University will contribute an equal share, as that of the worker, to the Welfare Fund. After a worker contributes regularly for 3 years, he shall be granted, where necessary, interest free loan upto 75% of the amount in his name. In extraordinary circumstances, the stipulated period of 3 years may not be insisted on. The workers will be included in the Group Insurance Scheme an their contribution paid from th Welfare Fund. The Financ Officer of the University will b in charge of the Welfare Fund.

The scheme has come int effect from 1.3.1983.

Rotating headship of Panjab University

The Syndicate has authorised the Vice-Chancellor to take further action in the matter of formation of various departmental committees and rotation of headship in view of the Government of India and UGC's letters and earlier agreement with the PUTA which had earlier been approved by the Syndicate of the University.

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Candidates are advised in their own interest to send their detailed curriculum vitae in advance.

Details in respect of qualifications etc. prescribed for the posts can be had from this Office.

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Assam Government to change academic year

The Government of Assam has decided to change the academic year from existing January-December to May-April from the current year to maintain uniformity of the academic year with other parts of the country.

Sri Mukut Sarmah, Education Minister of Assam told newsmen at Gauhati recently that the change of academic year would enable the students to go for higher education in different trades outside Assam without difficulties.

According to the revised system, now the school session in the State will start from May 1 every year and continue upto April 30 next year.

Cambridge scholarships for Nehru scholars

Ten meritorious students from India, designated as "Nehru Scholars", will receive scholarships at Cambridge University with effect from the next academic year starting October, 1984. The selection will be made out of those accepted for admission by the university.

The scholarships to defray the entire cost of studies are being given by the Cambridge Commonwealth Trust (C.C.T.) established in 1982 under the chairmanship of the Prince of Wales.

According to Mr L. K. Jha, a member of the C.C.T., the Trust has decided to associate the name of Jawaharlal Nehru, a student of Trinity College, Cambridge, with the 10 scholarships to Indian students each year. The decision to offer scholarships comes in the wake of a steady decline in the number of Commonwealth students seeking admission to Cambridge University due to a sharp increase in the fees payable by overseas students.

Two affiliated trusts, one in Cambridge—the Cambridge Nehru Trust—and the other in India—the Nehru Trust for Cambridge University—have been set up to supplement and complement the resources made available by the C.C.T.

The selection of a Nehru scholar for 1984 will be made in June this year out of those who have been accepted for admission into Cambridge University for a postgraduate course. The Vice-Chancellors of all Indian Universities have been informed of the details of this scheme.

Arrangements have also been made for forms of admission to be available in India from the Joint Secretary, Nehru Trust for Cambridge University, 10-Janpath, New Delhi.

New courses in Saurashtra University

The Saurashtra University has recently introduced M.A. (Home Science) courses. These courses are being taught from the current year at the A.K. Doshi Mahila College, Jamnagar. This is a two-year course, with an examination at the end of each year. The course includes papers on Experimental Cookery and Applied Nutrition, Principles of Home Management, Home Science, Education, Family Housing and Furnishing, Child Development, Textiles and Textiles Testing.

Those who have passed B.A. (Home Science) examination are eligible for admission to this course.

Further, the Continuing Education Centre of the university conducted with the cooperation of the University Departments, affiliated Colleges and other Institutions, several short term Courses. Of these, ninteen may be made of: Computer Programming — Fortran and COBOL; Electric Motor Repairing and Maintenance; Teaching of Arithmetic to Std. X; Vocational and Employment Guidance; Career Planning; General English — Conversational English; Basic and Vocational Guidance; Health and Nuitrition; Home Science; Canning and Food Preservation; Commercial Correspondence; Salesmanship and Advertisement; Art of Story Writing; Radio Drama; Arts of Press Reporting: Printing Technology; Vocal Music; Beauty Care, Yoga and Asanas.

Madras Varsity looks beyond affiliated colleges

The Madras Universiy has started looking beyond the affiliated colleges. It had recognised 25 institutions, both in the private and public sectors, engaged in research and extension work. More such institutions could look forward to securing affiliation by the university, according to the Vice-Chancellor of the university, Dr. M Santappa.

Kashmir Varsity's international symposium

A three-day National Symposium on "Central Asia and Western Himalaya — A Forgotten Link" was inaugurated recently by Begum Sheikh Mohammad Abdullah at the Campus of the University of Kashmir. The Symposium was organised by the Postgraduate Department of Botany to discuss the socio-cultural, geobotanical, scientific and technological links between the two regions.

Delegates from various parts of the country and outside especially from West Germany, Australia, Nepal participated in the Symposium.

Vice-Chancellor, Prof. Wahid-ud-Din Malik presented the welcome address and gave a detailed account of the various academic activities conducted by the Department of Botany.

Merit promotion scheme implemented at Karnatak Varsity

Karnatak University, Dharwad, has implemented the Merit Promotion Scheme. Four Readers and ten Lecturers have been promoted as Professors and Readers respectively. A few more promotions are expected shortly.

The University has also been the first in the State to introduce Headship by rotation. The response from teachers and students has been extremely encouraging.

News from Agril. Varsities

Low-cost farm machinery training concludes at PAU

A four-week training course in Low-cost Farm Machinery was recently held in the Department of Farm Power & Machinery of the College of Agricultural Engineering of the Punjab Agricultural University. The course was attended by a group of 12 agricultural machinery design engineers (two each from Phillippines, Thailand, Indonesia, Iran and Sri Lanka and one each from South Korea and India) who received intensive training in the production aspects of the low-cost agricultural machinery. They visited a number of small scale farm machinery manufacturing units in Punjab. They also prepared the design reports of different projects like multi-crop seed drill, multi-crop thrashers, multi-crop shellers, manually operated paddy transplanters, disc harrows, animal-drawn irrigation pumps etc. These trainees had earlier received a three-month training in the design concepts, characteristics and design procedures for different types of low-cost farm machinery in Italy and visited various farms and factories there.

This training was sponsored by the Regional Network of Agricultural Machinery (RNAM), which is a project of the United Nations' Economic and Social Commission for Asia and the Pacific (ESCAP). The training was executed by the International Labour Organisation (ILO) International Training Centre for Advanced Technical and Vocational Training, Turin, Italy.

Mr F. Campagna, Project Manager, ILO, who had specifically come for participating in the final evaluation and presentation of the project reports, told that the main reason for selecting the College of Agricultural Engineering of the PAU for executing the fourth phase of this training was its eminence in the field of agricultural machinery design and excellent research and development work done by it, a large number of small scale industries engaged in the manufacture of low-cost agricultural machinery and there being one of the most progressive agriculture being practised by the agents in the Punjab.

Dr Sukhdev Singh, Vice-Chancellor of the University who awarded certificates to the trainees, said that the College of Agricultural Engineering had reached a level where it was in a position to undertake International Training Programme in the field of agricultural machinery design and could also extend the benefit of the University's expertise to other developing countries in Asia and elsewhere in the world in several fields of technology.

PAU engineers develop new sprayer attachment

After intensive field experiments and modification on tractor drawn cotton sprayer. Dr. L.N. Shukla, Dr. S.K. Tandon and Dr. K.S. Sodhi of the Department of Farm Power & Machinery of the Punjab Agricultural University have developed a simple attachment for the rear tractor tyre mud guards that eliminates damage to the side rows of the cotton crop.

According to these engineers, the low yield of cotton in Punjab can be attributed to ineffective disease control by manually operated Knapsach sprayer. They are confident that a tractor-drawn sprayer with uniform flow through nozzles and filled with this modification can be used for uniform spraying on the crop even at the later stage of growth resulting in better yield.

Cotton research programme in Australia

The Australian Government has allocated $630,000 towards cotton research in 1983-84.

The cotton research program came into force in March, 1983. It is funded from levies paid by cotton growers, with matching contributions by the Government.

The program announced recently is the first to be undertaken and will involve 26 projects.

The Minister for Primary Industry, Mr John Kerin, said the funds would be used in the study of entomological problems, particularly heliothis, in the development of new cotton varieties and the general improvement of agronomic techniques.

In the past 15 years the Australian industry has grown from a bounty-dependent small-scale producer for the local market to an independent and internationally competitive exporter of cotton.

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Significance of Adult, Continuing Education and Extension Programmes in Universities

N. Venkataiah*
P. Adinarayana Reddy**

It is heartening to note that the University Grants Commission has recently issued revised guidelines on programmes of adult and continuing education and extension through universities and colleges and has invited proposals accordingly. Cent per cent financial assistance of the U.G.C. will be available for a period of five years for the proposals accepted by the Commission and this assistance will be outside the plan-allocation of the university. This is a commendable step on the part of the U.G.C. and the universities have to welcome this step whole-heartedly with commitment and conviction in the extension work.

Adult, continuing and extension programmes have been implemented since 1970 in some of the Indian universities. Those who are associated with such programmes in the universities or those who have acquaintance with such programmes of various universities have to modestly accept that these attempts are sporadic. Besides the problem of paucity of funds there are certain issues which are directly or indirectly responsible for the lethargic attitude of the universities in so far as the implementation of adult, continuing education and extension programmes in the universities are concerned.

Certain adverse views which may be branded as 'Orthodox' are prevailing in the universities about these programmes. According to this orthodox view, the implementation of these programmes lowers the dignity of the universities and interferes with more important and legitimate work of advancing genuine scholarship and research. Some academicians are of the opinion that the universities have to dissipate their energies on these activities which do not really belong to them. They further caution that the falling standards in teaching and research will still deteriorate if the universities shoulder the responsibility of the extension programmes. These traditional academicians also suspect that if the universities get too much involved in community affairs, the ideal and pure academic atmosphere may suffer through the interference of community leaders. They also doubt the experience of using the time and resources of highly trained skills of the university faculties for activities such as adult, continuing and extension programmes while other problems of improving the standards of teaching and research are awaiting their attention.

All these arguments do not carry any weight and such arguments have no place in the present set-up of the modern universities. Moreover, the counter argument is that no university would justify its existence if it ignores the demands of the community in which it is situated and to which it owes its existence. It is essential that every university which is a great seat of learning in the community should shoulder the responsibility of using the talents of the members of the faculties freely to all the members of the community who sincerely desire to get the benefits from the universities. Formal education which is regular and full time expects a previous general education among the students for their admission. The work in the adult, continuing and extension education programmes is part-time. These programmes need not require the previous formal academic training on the part of the participants. Maturity of mind, and a better grip of reality because of the experience of the world compensate for the lack of a previous literary training. Gone are the days when the universities remained isolated from the society as ivory towers. Today, in the universities all over the world, in addition to teaching and research, third dimension, namely, the function of extension has been accepted as legitimate work. It is well realised that it is only through the function of extension, the universities can discharge their social obligation to the community.

Almost all universities in advanced countries have realised the value of extension education programme of one kind or another. Of late, Indian universities too have started accepting the obligation that they should share new knowledge and technology with the surrounding communities for mutual benefits on both sides. In pursuance of this view, extension education programmes of different universities cater to the needs and problems of the community they serve.

The idea underlying in all extension programmes is that education is continuous process, that is not to be equated with studying for a degree does not cease with taking of a degree. Any extension education programme serves to impart vocational skills which may enable the person to improve his position in life, seeking his desire for knowledge or make him a cultural citizen without his having been an alumnus of a university.

Acceptance of extension work as a third dimension of the universities is no doubt an ideal and welcoming feature. But mere acceptance and implementation of extension programmes will not alleviate the appalling conditions of the community. Such programmes which could meet the needs and problems of the target groups should be planned pragmatically. Commitment and conviction towards social service and optimistic and liberal outlook are prerequisites on the part of the organisers of the extension programmes. Step-motherly attitude or half-hearted attempt on the part of the planners of the extension programmes will kill the very purpose of extension programmes.

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It is worth noting some reasons for the failure of extension activities in the universities. A person who has no deep conviction and knowledge of the extension activities may be kept in charge of the programmes. Sometimes a third rate person who is a misfit in his area of specialisation has to be elevated with political pressure and such person will find place in extension work. In fact for extension programmes persons who are successful as academicians and command respect from other academicians and administrators should be preferred. The success of the extension programmes depends on the organisational ability, dynamism, initiative, knowledge and perseverance of the person incharge of the programmes. If a 'fit for nothing fellow' is incharge the extension programmes will lose their value and become routine, mechanical and uninteresting.

No staff member who is good both in academic and administrative lines agrees to shoulder the challenging task of extension work unless and otherwise the universities accord to the Extension Department the same status as that of teaching and research. Extension Department should not be looked upon as something peripheral and it should be viewed as the integral part and function of the university.

Adult Education Programmes

In a democratic community adult education should be a normal part of educational provision of any university. When we say adult education in the context of university we mean all-round education for adults that would help for the development of personality and of wise and public spirited citizenship. University adult education programmes need not always cling to adult literacy which gives importance to 3 R' s—reading, writing and arithmetic.

Adult education in our country, as in many other countries, is a voluntary movement with all merits and demerits of voluntary efforts. Lack of an organised system and continuity of the programmes are the main defects whereas initiative, channelising all energies and devotion to the cause are the merits of the voluntary efforts in adult education. However, the efforts of the voluntary agencies in the field of adult education are not sufficient when compared to the magnitude of the work to be attended. The universities have to come forward with three main purposes to be served through their adult education programmes. Firstly those programmes should provide development of vocational skills and better professional adjustment. Secondly adult education should respond to the personality needs of adults for communication with other people who are interested in the same thing. Through wider knowledge adult education has to help in the development of personality or in acquiring hobbies and avocations. Lastly adult education has to prepare adults for community actions.

Besides these general purposes of adult education, our country is now committed to implement National Adult Education Programme. Adequate support of the expertise is essential for the success of this massive programme. For strengthening this programme university programmes of adult education should be able to provide training to the key persons and field functionaries and such technical help which may not be available elsewhere. Action research in the area of National Adult Education Programme is to be carried out by the researchers in the universities.

The main objective of adult education programme in universities should be to educate and mobilise the masses and to involve them meaningfully in national development. The programme should also strive to make all adults particularly in the age group 21-35 functionally literate and lay the greatest emphasis on the non-formal education of youth. A massive programme of motivating, enthusing adults, training voluntary workers and institutions in the jurisdiction of the university will have to be developed.

Continuing Education Programmes

Continuing education programmes have gained strength in Indian universities in this decade. Summer institutes, summer schools, summer courses, refresher courses organised by various departments of the universities attract professionals to learn about new developments in their fields. Number of seminars, workshops held by the departments of the universities enable the scholars and experts to come together and exchange their views and discuss the problems in their fields to become aware of new trends and development in their chosen professions. Another important development in the universities under continuing education programmes is the popularisation of correspondence courses. Thus the universities have vast scope to extend the continuing education programmes to the community.

The universities may organise general education courses in humanities, social sciences and sciences to enable the average citizen to keep up-to-date to understand public issues and the significance or progress in the economic, social and scientific fields. Professional courses, courses in human relations, leadership and management skills, programmes for workers' education, training of personnel, programmes for the rural community etc. are some other continuing education programmes on which the universities may focus their attention.

Extension Programmes

The meaning of the term 'university extension' is to be understood in three ways:

(1) The extension of the university to the whole community;
(2) The extension of university education throughout the life span of an individual; and
(3) Extension of what a university stands for to all the vital interests of life.

The role of university extension, that too in a democratic community, is of vital significance. But such efforts on the part of the universities in the name of extension lectures are sporadic and all the strata of the community are not able to get the benefit of such programmes. The universities have to increase different extension programmes to embrace as many categories of people as possible.

The extension programmes of the universities will fall into two broad categories :

I. **Extension services to schools and colleges:** The Extension programmes of the university should help the schools to improve standards by inservice education of teachers, sharing facilities, provision of enrichment programme for students and discovery and cultivation of talent.

II. **Extension service to the community**: It should be the obligation of the teaching community to give extension lectures to interpret recent trends in their fields to the community, to create scientific awareness, to participate in adult education and workers' education programme etc. Universities can also help in the preparation of developmental projects for the community around them.

The extension activities bring about contacts between teachers in the universities and citizens outside the university campus belonging to all walks of life especially those who have to earn their daily bread by the sweat of their brow and at the same time crave for an intellectual life which circumstances may have denied to them in their youth.

At present the extension activities are being taken up now and then by individual departments and they are not able to do much because they cannot divert their attention completely to this programme. It is true that the efforts of different departments even in the same university are not coordinated and hence there is no systematic and organised effort to fulfil the obligation of the university extension to the community. In order to converge the divergent efforts, systematise the organised efforts and to enhance the scope of the extension work of the universities, the U.G.C. has come forward with its revised guidelines on adult, continuing education and extension programmes in the universities and colleges.

As proposed by the U.G.C. the objectives of adult, continuing education and extension programmes are as follows:

(1) To enable the universities to establish the necessary linkage with the community by offering need based and relevant educational programmes;

(2) To provide opportunities for disseminating knowledge in all walks of life in different segments of population for their intellectual growth, professional and technical competence;

(3) To cater to the felt needs of all people but specially to the needs of the less privileged and under privileged sections;

(4) To enrich higher education by integrating continuing and adult education programmes and extension work;

(5) To provide an opportunity to the faculty and the students to an exposition of field experiences — problems and realities; and

(6) To enable the faculty and students participation in extension research and action research.

In order to facilitate comprehensiveness and integration as mentioned in the circular of the U.G.C., "It is necessary to bring all aspects of continuing education, adult education and population education under a single umbrella, that is, Department/Centre of Adult and Continuing Education and Extension Work". The U.G.C. has also stressed that "this Department should have the same status for the representation on academic bodies of the university, recognising its inter-disciplinary nature and functions.". It is up to the university authorities to understand in the right perspective the importance of the proposed Department and to seek the assistance for the establishment of such Department by sending useful, meaningful and comprehensive proposals to the U.G.C. The significant contribution of the proposed centre/department need not be overstressed. □

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11. Singh, Sunil Kumar. Paul Scotts' The Raj Quartet: A study of national aspirations and British attitudes in the novels. Banaras Hindu University. Dr. G.B. Mohan Thampi, Department of English, Banaras Hindu University, Varanasi.

12. Surendran C.P. Colin Eilson as a novelist of ideas. Banaras Hindu University. Dr. G.B. Mohan Thampi, Department of English, Banaras Hindu University, Varanasi.

Sanskrit

1. Baruah, P. A literary study of the works of Shri Sankardeva. Gauhati University. Dr. M.M. Sarma, Gauhati University, Gauhati.

2. Goswami, Neelima. A study on the concept of appearance in Acharya Sankara and Abhinava Gupta with special reference to Paramarthasara. Gauhati University. Dr. P.P. Upadhyaya, Gauhati University, Gauhati.

3. Misra, N.D. Yaska's Nirukta: A comparative study. Gauhati University. Dr. M.M. Sarma, Gauhati University, Gauhati.

4. Mohammad Saruharuddin Ahmed. A literary study of the sanskrit inscriptions of Assam. Gauhati University. Dr. M.M. Sarma, Gauhati University, Gauhati.

5. Ray, S.M. A study of the Ayurveda in the Satapatha Brahamana. Gauhati University. Dr. B.N. Hazarika, Gauhati University, Gauhati.

Pali

1. Barua, Sukomal. A study of mind as explained in early Buddhist tests. Banaras Hindu University. Dr. H.S. Shukla, Department of Pali, Banaras Hindu University, Varanasi.

2. Mutusuddy, Pintu. The concept of Pancakkhandha in early Buddhist tests. Banaras Hindu University. Dr. P. Dubey, Department of Pali, Banaras Hindu University, Varanasi.

Bengali

1. Basu, Susmita. Rajanikanta sener kavya kriti. Banaras Hindu University. Dr. Amar Nath Ganguli, Department of Bengali, Banaras Hindu University, Varanasi.

2. Bhattacharjee, Leena. Studies in the sequel of Bengali prosody in the eighteenth century. Gauhati University. Dr. B.N. Rakshit, Gauhati University, Gauhati.

3. Bhattacharjee, M. Descriptive analysis of Goalpara dialect. Gauhati University. Dr. S. Biswas, Gauhati University, Gauhati.

4. Bhattacharyya, S.R. Critical analysis of bhakti sandarbha. Gauhati University. Dr. S. Biswas, Gauhati University, Gauhati.

5. Bhowmick, P. Bibhuti Bhusan Mukhopadhyaya as a short story writer. Gauhati University. Dr. S. Biswas, Gauhati University, Gauhati.

6. Chakrabarty, Amalendu. Nalinikanta Gupta and his contribution to Bengali literature. Gauhati University. Dr. D. Sen, Gauhati University, Gauhati.

7. Goswami, Pronati. Parasuram as a short story writer: His Mind and Art. Gauhati University. Dr. S. Biswas, Gauhati University, Gauhati.

8. Paul, Krishna Ranjan. A critical study of the literary criticism of the works of Bankim Chandra in Bengali, 1865-1937. Gauhati University. Dr. D. Sen, Gauhati University, Gauhati.

Assamese

1. Bora, Kuhi Ram. A critical study of the historical novels of Rajani Kanta Bardoloi. Gauhati University. Dr. G. Goswami, Gauhati University, Gauhati.

2. Das, N. A comparative study on lyrics of Sankar Madhave Deva and Surdas. Gauhati University. Dr. S.N. Sarma, Prof. (Retd.), Gauhati University, Gauhati.

3. Goswami, Pranati. Female characters in modern Assamese drama. Gauhati University. Dr. S. Bharali, Gauhati University, Gauhati.

4. Khan, Abdul Ghaffar. Constructive study of manipuri (Meiteilon) and english phonology. Gauhati University. Dr. G. Goswami, Gauhati University, Gauhati.

5. Pathak, Ramesh. Studies in Assamese vocabulary. Gauhati University. Dr. G. Goswami, Gauhati University, Gauhati.

Persian

1. Barlaskar, D.H. Influence of Persian on Assamese. Gauhati University. Dr. A.K. Burke, Gauhati University, Gauhati.

Malayalam

1. Haridasan, K. Bharatha gatha: A critical study. Kerala University. Dr. T.G. Ramachandran Pillai, Prof., Department of Malayalam, College, for Women, Trivandrum.

Geography

1. Singh, Subhash Chandra. Economic development and regional planning in Gonda. Banaras Hindu University. Dr. (Miss) P. Kapoor, Department of Geography, Banaras Hindu University, Varanasi.

History

1. Chaube, Prabhakar. The political history of Bundelkhand from earliest to C 1300 A.D. Dr. Hari Singh Gour Vishwavidyalaya. Dr. V.D. Jha, Dr. Hari Singh Gour Vishwavidyalaya, Sagar.

2. Ghosh, Sujit Kumar. A socio-cultural study of Cachar during 18th and 19th Century. Gauhati University. Dr. S.K. Barpujari, Prof. (Retd.), Gauhati University, Gauhati.

3. Gupta, Prabhu Dayal. Mahabharat ka raj shastriya adhyayan. Dr. Hari Singh Gour Vishwavidyalaya. Dr. R.N. Agarwal, Dr. Hari Singh Gour Vishwavidyalaya, Sagar.

4. Kalsi, Harbhajan Singh. Indianisation of the army in India, 1921-1947. Himachal Pradesh University. Dr. Eva Mehrotra, Department of History, Himachal Pradesh University, Simla.

5. Nath, Aruna. A study of the social changes in Assam, 1826-1900. Gauhati University. Dr. J.N. Phukan, Gauhati University, Gauhati.

6. Nirmla Devi. Development of english education in Panjab in later half of nineteenth century. Himachal Pradesh University. Dr. L.P. Pandey, Department of History, Himachal Pradesh University, Simla.

7. Singh, Surendra Kumar. East India Company ke adhin Bihar kee rajsewa, 1765-92. Banaras Hindu University. Dr. S.C. Mukhopadhyaya, Department of History, Banaras Hindu University, Varanasi.

8. Sonowal, N. The political relations of the Kacharis with their neighbouring kingdoms. Gauhati University. Dr. P. Choudhury, Gauhati University, Gauhati.

9. Syeda Mumtaza, Khatun Iftikharunnisa. External relations of the Ahom Government with special reference to diplomatic exchanges. Gauhati University. Dr. J.N. Phukan, Gauhati University, Gauhati.

10. Thakur, Laxman Singh. Temple architecture in Himachal Pradesh from earliest times to the fourteenth century A.D. Himachal Pradesh University. Dr. L.P. Pandey, Department of History, Himachal Pradesh University, Simla.

11. Yadav, Sonaphi. The Karnatas and their times. Banaras Hindu University. Prof. Lallanji Gopal, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Psychology

1. Agarwal, Meena Rani. A comparative study of educational interests, patterns of high school female students of U.P., Tarai area. Rohilkhand University.

2. Agarwal, Sarita Devi. A comparative study of the personality patterns of the children of woking and non-working mothers. Rohilkhand University.

3. Chowdhury, Mahashweta. Cultural variables in conservation: Training by self-transformation and screening in two cultures. Utkal University.

4. Dabral, Saraswati. A study of the causes of absenteeism among higher secondary degree level students. Rohilkhand University.

5. Khanna, Rajesh Kumar. The relationship between fantasy measures of motives and affective arousal in response to motive related clues: A test of McClelland's affective arousal model of motivation. Panjab University.

6. Sarjit Kaur. A study of personality and motives of criminals in relation to crime and duration of stay in open and closed jails. Panjab University.

7. Sewa Ram. A study of corruption in Uttar Pradesh Police. Rohilkhand University.

8. Tandon, Rita. Job satisfaction, job involvement and self-esteem as factors influencing production in case of blue-collar industrial workers. Banaras Hindu University.

Sociology

1. Durgapal, B.C. Efficient and economic use of rural wastage: A strategy for rural development. University of Roorkee.

2. Ibrahim Rocket, Market centres and regional development: A case study of Delhi-Jaipur-Agra triangle. Jawaharlal Nehru University.

3. Mathew, Joseph. Ideology, protest and social mobility among Mahars and Pulayas: A comparative study. Jawaharlal Nehru University.

4. Mishra, Tribhuwan Narayan. Samajik tanao evam chirkari rog: Sir Sundarlal Chikitsalaya Kashi Hindu Vishwavidyalaya mein varti T.B., hridaya rog, dama, madhumeha evam gaistrik rogiyon per adharit ek samaj vaigyanik adhyayan. Banaras Hindu University.

5. Misra, Gopalji. Some social problems of industrial health in a coal field setting: A study based on coal mines labourers of Dhanbad in Bihar. Banaras Hindu University.

6. Mohammad Akil Ismail. Uttar Pradesh mein jila Badaun ke Muslim dharmik sansthanon ka samaj shastriya adhyayan. Rohilkhand University.

7. Nuna, Sheel Chand. Spatial fragmentation of political behaviour in India: An analysis of electoral trends, 1971-1980. Jawaharlal Nehru University.

8. Ouchi, Keiji. Quality of physical environment in rural settlements: A case study of National Capital Region of India. Jawaharlal Nehru University.

9. Sharma, Ashok Kumar. Changing status and employment pattern of educated women with reference to role conflict. University of Roorkee.

10. Sharma, Kumud. Psychosomatic disorders in relation to urbanization. Banaras Hindu University.

11. Vishnu Gopal. Workers' participation in management; A sociological study of the organisational structure and functioning of the new scheme in the Diesel Locomotive Works, Varanasi—A Public Sector Undertaking. Banaras Hindu University.

Political Science

1. Beena Rani. Bharat kee rajniti mein bhasha kee samasaya, 1947-1980. Rohilkhand University.

2. Bhattacharjee, Tanmay. Sociology of the Karbis. Gauhati University.

3. Billore, Sandhya. India's foreign policy, 1970-77. Devi Ahilya Vishwavidyalaya.

4. Garg, Urmila. Adhunik Bhartiya rajniti per naitik aur dharmik prabhav. Awadhesh Pratap Singh University.

5. Gupta, Chitra Rani. Bhartiya sansad mein virodhi dalon kee bhumika, 1967 se 1976 tak. Rohilkhand University.

6. Gupta, Manjula. Bhartiya rajniti mein hit samuh evam dabav samuh kee bhoomika evam vyavharikvadee vishleshan. Vikram University.

7. Hamendra Kumar. A study of the Municipal Government of Budaun City since independence. Rohilkhand University.

8. Jha, Shashi Kant. The USSR Supreme Soviet at work: A study of presidium, standing commissions and adhoc committees, 1958-1976. Jawaharlal Nehru University.

9. Mohapatra, Jayanta Kumar. The study of factional politics in an Indian state: The Congress Party in Orissa, 1967-77. Berhampur University.

10. Muttom, John. Problems of regional arms race in the Persian Gulf Region. University of Kerala.

11. Prabhu, G. Balakrishna. Salt talks: A critical study of its origin, development and impact on world affairs in general. University of Mysore.

12. Sarvesh Kumar. Swatantroprant Agra mandal kee nagarpalikaon mein karyon evam sangthan ka alochnatmak mulyankan: Vishesh rup se Kasganj Nagarpalika ke sandarbh mein. Rohilkhand University.

13. Sharma, Arvind Kumar. The role of Indian National Congress in political movement in Chhattisgarh, 1917-47. Ravishankar University.

14. Sharma, Usha. Swatantrta ke pashchat Bareilly Jila Parishad ke vikas evam karyon ka alochnatmak mulyankan. Rohilkhand University.

15. Sharma, Ved Vart. Jawaharlal Nehru: Ek samajvadi darshnik. *D. Litt.* Rohilkhand University.

16. Sinha, Pramod Kumar. The political outlook of Ballabh Bhai Patel. University of Bihar.

17. Surendra Nath. Z.A. Bhutto's leadership. University of Rajasthan.

18. Taj, Abdul Khadeer. Conflict and cooperation in the Indian Subcontinent: A case study of India-Pakistan relations 1972-1978. Jawaharlal Nehru University.

19. Tewari, Usha, Bhartiya sanwidhan mein samajik nyaya. Devi Ahilya Vishwavidyalaya.

20. Tripathi, Jai Prakash. Bhartiya rashtriya andolan mein Bharat ke Samyavadi Dal kee bhoomika. Rohilkhand University.

21. Verma, Kiran. Bhartiya Lok Sabha mein mahila sadasya, 1952-79; Prishtbhumi evam vicharon ka adhyayan. Banaras Hindu University.

Economics

1. Chakraborti, Sibaji. Economics of crossbred cattle: A cost benefit study. University of Calcutta.

2. Dass, Susanta Krishna. Dynamics of taxation in a developing economy with special reference to Assam, 1964-65 to 1978-79. Jawaharlal Nehru University.

3. Deshpande, Kumudini C. Industrial cooperatives in Dhule District: A case study. University of Poona.

4. Dinger, Shyam Mohan. Changes in the cropping pattern and agricultural production in U.P. : An econometric analysis. Chandra Shekhar Azad University of Agriculture and Technology.

5. George, Abraham. A study of the economy of Lakshadweep Islands. University of Calicut.

6. Jawach, A.R. An analytical study of municipal revenue in Rajasthan, 1965-1975. University of Rajasthan.

7. Khandooja, Nanak Chand. Sales tax in Uttar Pradesh: A critical study. Rohilkhand University.

8. Khule, Dilip Kumar. Ujjain sambhag mein berojgari kee samasya evam laghu udyogon dwara uska nidan. Vikram University.

9. Maiti, Asok Kumar. Studies on the social and economic factors governing production forces and production relations at the rural community level. University of Calcutta.

10. Mutha, Suman. Financing of agricultural operation through commercial banks in Ujjain District with special reference to Lead Bank. Vikram University.

11. Sailabala Debi. Cost-benefit analysis of higher education: A case study of Orissa. Utkal University.

12. Satwinder Singh. Transnational corporations and the pharmaceutical industry in India. University of Poona.

13. Shaikh Abdus Sabur. Demand, supply and price structure of potato in Bangladesh. Haryana Agricultural University.

14. Singh, Nathoo. Bhoomi sudhar kee nai pravritiyan: Janpad Bijnor ke chune huye gramon ka sarvekshan. Rohilkhand University.

15. Upadyaya, Ashok K. Peasantisation of tribals in Thana District, 1818-1947. University of Poona.

Public Administration

1. Upadhyay, J.N. The impact of D.P.A.P. assistance: A socio-economic study/survey of small/marginal farmers and agricultural labourers. Magadh University.

Military Science

1. Singh, Ved Pal. Tibetan expedition of 1904 and its subsequent diplomatic relations. Rohilkhand University.

Education

1. Bhatnagar, Harmohan. A study of occupational choices of adolescent girls and factors influencing them. Himachal Pradesh University.

2. Gupta, Yogesh Kumar. A comparative study of effective and ineffective high school teachers in relation to personality factors, organisational climate, sex, location of the schools and disciplines in Moradabad District. Rohilkhand University.

3. Lakshman Kumar. A study of economic aspect of higher secondary education in Delhi. Jamia Millia Islamia.

4. Madhukar, C. An investigation into some of the innovations practised in the colleges of education of Karnataka State and the extent of their diffusion. Bangalore University.

5. Nirmal Kumar. Job analysis of secondary school teachers. Banaras Hindu University.

6. Sudha Kumari. A study of intelligence, achievement, adjustment and socio-economic patterns of different sociometric groups of adolescents. Panjab University.

7. Vasudeva Rao, Bandaru Satya. National Adult Education Programme in Visakhapatnam District: A study of differential impact. Andhra University.

8. Vyas, Chandrakant Shamaldas. Development of Symbol Picture Logic Programme and to study its effect on mathematics achievement: A systems approach. Sardar Patel University.

Commerce

1. Avdesh Kumar. A study of cooperative banking in Uttar Pradesh. Rohilkhand University.

2. Bhartia, Rama Shanker. Project planning in industrial enterprises in India: A case study. Banaras Hindu University.

3. Dubey, Onkar Nath. Contribution of U.P. sales tax to state revenue. Banaras Hindu University.

4. Gupta, Prem Chand. Economics of regional rural banks: A case study of regional rural banks in Uttar Pradesh. Rohilkhand University.

5. Inamdar. Vikas H. Project exports of India: Problems and prospects. University of Poona.

6. Jain, Babulal. Ratlam jile kee audyogik sanrachna. Vikram University.

7. Khan, Zahid. Management of working capital in public sector units: A study of U.P. Govt. undertakings. Rohilkhand University.

8. Kulkarni, S.S. A study of the impact of the cycle industry on mobility of population with reference to Pune City, 1969-80. University of Poona.

9. Rastogi, Peush Kumar. Post-nationalisation trends in Indian banking. Rohilkhand University.

10. Rathore, Pannalal. Madhya Pradesh mein rasaynik urvarkon ka vipnan. Devi Ahilya Vishwavidyalaya.

11. Savaji Mahmoud. Study into commercial aspects of oil industry in Iran. University of Poona.

12. Saxena, Arvind Kishor. Operational efficiency of industrial finance institutions with special reference to I.F.C.I., I.C.I.C.I. and I.D.B.I. Rohilkhand University.

13. Sen, Dilip Kumar. Depreciation accounting : A study of principles, policies and practices in selected industrial enterprises of Bangladesh. Panjab University.

14. Srivastava, Vinod Kumar. Problems and prospects of private sector bus transport in U.P. Rohilkhand University.

Home Science

1. Chakradev, Smita. Studies on leaf protein concentrates. Shreemati Nathibai Damodar Thackersey Women's University, Bombay.

2. Subhashini. Nutritional profile of Ludhiana school children. Punjab Agricultural University.

Management

1. Shrestha, Manohar Krishna. Financing of public enterprises in Nepal: A study with special reference to financial planning in public utilities. University of Delhi.

THE UNITED STATES EDUCATIONAL FOUNDATION IN INDIA

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12 Hailey Road
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ANNOUNCEMENT

The U.S. Educational Foundation in India is happy to announce the appointment of Professor C.J. NIRMAL of the Department of History, Madras Christian College, as Regional Officer, USEFI, Madras, from November 21st, 1983.

Mrs. Sharada Nayak
Director

SAURASHTRA UNIVERSITY
RAJKOT-360005

Applications in the prescribed forms are invited for the undermentioned posts. Application forms alongwith detailed requirements of qualifications and experience for these posts will be available from the Registrar, Saurashtra University, University Campus, Kalawad Road, Rajkot 360 005, on sending a self addressed envelope of the size 23 x 11 cms with postage stamps worth Rs. 1.90 p.

Applications (seven copies) accompanied by Indian Postal Order for Rs. 10/- crossed in favour of the Registrar, Saurashtra University, Rajkot, should reach this office on or before **16-1-1984**.

1. Department of Physics

1. Reader—1. Specialization in Theoretical Physics preferably in the area of atomic and molecular physics.

2. Lecturer—1. Specialization in Nuclear physics with emphasis on Mossbauer spectroscopy **OR** Solar Energy and Environmental Physics **OR** Theoretical Physics **OR** Solid State Physics **OR** Electronics.

2. Department of Chemistry

1. Reader—1. Specialization in Marine/Analytical Chemistry. Experience in chemical and physical oceanography, isolation of marine natural product, analytical chemistry and handling of analytical instruments.

2. Lecturer—1. Specialization in Physical Chemistry.

3. Department of Mathematics and Statistics

1. Reader—2. Specialization in Pure or Applied Mathematics. Specialization in Statistics.

2. Lecturer—2.

Specialization in Functional Analysis and Operator Theory.

4. Department of Sociology

1. Reader—1. Specialization in Statistics.

2. Lecturer—1. Preferably specialization in Rural Sociology.

5. Department of Education

1. Reader—1. Specialization in Research Methodology, Educational & Vocational guidance and Psychological Testing.

6. Department of Commerce

1. Reader—1. Specialization in General Management OR Marketing Management OR Personnel Management.

2. Lecturer—1. Specialization in quantitative analysis or Finance or Public Enterprise Management.

7. Department of Economics

1. Lecturer—1. Preferably specialization in quantitative Economics, Development Economics, Agricultural Economics, Management Economics & Rural Economics.

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1. Reader : Rs. 1200-50-1300-60-1600-assessment-60-1900.

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The posts are permanent and the appointment shall be given on probation initially for one year which may be extended for a period not exceeding one year. The University reserves the right to make or not, appointments to these advertised posts and also reserves the right to make appointments to more posts than the number of posts advertised.

The initial appointment shall be with the minimum of pay scale but in suitable cases higher initial pay may be considered. The allowances like D.A., A.D.A., H.R.A. etc. and benefits of pension Scheme inclusive of Family Pension, Gratuity & General Provident Fund (or Contributory Provident Fund as the case may be for this university employees who have not opted for Pension Scheme) as per the Statute 219 of this University will be admissible.

Age ordinarily not exceeding 55 years. The age, educational qualifications and the experience may be relaxed in suitable cases. The employment shall be subject to the conditions of service rules for the University employees as may be amended from time to time.

The candidates already in employment must submit their applications through their present employers. Those knowing Gujarati and/or Hindi will be preferred. The candidates will have to travel at their own cost if called for interview.

V.M. Desai
REGISTRAR

BANARAS HINDU UNIVERSITY

(Advertisement No. 9/1983-84)

Applications are invited for the undermentioned posts. The benefit of Provident Fund/Pension, Dearness Allowance, House Rent Allowance and City Compensatory Allowance are admissible according to University rules. The retirement age of University Employees is 60 years. The appointment will be made on one year probation. Higher starting salary within the grade is admissible to specially qualified and experienced candidates.

Applications will be entertained on the prescribed form duly supported with a Bank Draft or Crossed Indian Postal Orders of Rs. 7.50 (of Rs. 2.00 for the candidates belonging to Scheduled Caste/Scheduled Tribe) in favour of the Registrar, Banaras Hindu University towards application fee. Application forms will be supplied free of cost by the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221005 on receipt of Re. 0.90 paise stamped self-addressed envelope of 23 cm x 10 cm size. Candidates called for interview for these posts will be paid actual Railway fare by the second class plus reservation charges for sleeper, if paid, and/or actual Bus fare from the present residence bothways by the shortest route as per University rules. No other expenses will be paid.

Applications for each post be sent separately alongwith attested copies of certificates in support of the qualifications and experience mentioned in the application and be addressed to the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221005.

Incomplete application in any respect will not be entertained for consideration.

Those who are in service should apply through proper channel. M.O. or Cheque will not be accepted towards application fee.

Applicants may send their bio-data alongwith attested copies of all the certificates and details on plain paper alongwith the application fee of Rs. 7.50 (of Rs. 2.00 for the candidates belonging to Scheduled Caste/Scheduled Tribes) in Bank Draft/I.P.O. to avoid delay in case they do not get the prescribed form in time.

The last date for receipt of application in the Office of the Registrar (Selection Committee Section), Banaras Hindu University either by post or by hand will be **January 10, 1984**. No applications shall be entertained after the last date from external, in-service employees and the candidates residing abroad.

Note : Number of vacancies are tentative and can vary according to needs.

1. **Professor of Library Science** (One) (Faculty of Arts). Grade : Rs. 1500-60-1800-100-2000/125/2-2500.

Qualifications Essential : An eminent scholar with published work of high quality, actively engaged in research. About ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

2. **Reader in Hindi** (One) (Faculty of Arts)

Grade : Rs. 1200-50-1300-60-1900.

Qualifications Essential : Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years experience of teaching and/or research provided that atleast three of these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record of teaching/research.

DY. REGISTRAR (Admin.)
Selection Committee

UNIVERSITY NEWS, JANUARY 1, 1984 Regd. No. R.N. 7180/63 Postal Regd. No. D(C)-1086

केन्द्रीय हिन्दी संस्थान

हिन्दी संस्थान मार्ग, आगरा-282005

		रु०
हिंदी और तमिल की समान स्रोतीय भिन्नार्थी शब्दावली		6-00
हिंदी के अव्यय वाक्यांश		6-00
हिंदी और मणिपुरी परसर्गों का तुलनात्मक अध्ययन		6-00
समसामयिकता और आधुनिक हिंदी कविता		6-00
हिंदी के रूपांतरण व्याकरण के कुछ प्रकरण		10-00
हिंदी का कारक व्याकरण		10-00
भाषा-विज्ञान की अधुनातन प्रवृत्तियां और द्वितीय भाषा के रूप में हिंदी भाषा-शिक्षण		6-00
भाषा संप्राप्ति मूल्यांकन		6-00
समान स्रोत और भिन्न वर्तनी की शब्दावली : ओडिया हिंदी और हिंदी ओडिया		6-00
साहित्य में बाह्य प्रभाव	सजिल्द	15-00
	अजिल्द	10-00
प्रयोजनमूलक हिंदी		10-00
समान स्रोत और भिन्न वर्तनी की शब्दावली : असमीया हिंदी और हिंदी असमीया		7-00
पाणिनी व्याकरण में प्रजनक प्रविधियां		5-50
शैली और शैली विज्ञान		18-50
भारतीय जीवन और संस्कृति		12-00
Hindi Script (Self Instructional Material)		7-50
Indian Bilingualism	H.B.	35-00
	P.B.	30-00
Proceedings of the Fourth All India Conference of Linguists		40-00

		रु०
भाषा-शिक्षण तथा भाषा-विज्ञान		28-00
हिंदी का भाषा-वैज्ञानिक व्याकरण		35-00
हिंदी संरचना का अध्ययन-अध्यापन		22-00
हिंदी शब्दावली और प्रयोग	भाग–1	16-00
	भाग–2	19-00
बालक में भाषा का विकास		7-50
जनजाति-भाषाएं और हिंदी-शिक्षण		27-00
कोश-विज्ञान		7-00
बारहवीं सदी से राजकाज में हिंदी		22-50
हिंदी की आधारभूत शब्दावली		15-00
शैली-विज्ञान और आलोचना की नई भूमिका		16-00
भाषा-मूल्यांकन तथा परीक्षण		16-00
तेलुगु और हिंदी ध्वनियों का तुलनात्मक अध्ययन		13-00
उच्चस्तरीय अंग्रेजी हिंदी अभिव्यक्ति		17-00
हिंदी साहित्य का अध्यापन		10-00
बैंकिंग हिंदी पाठ्यक्रम		35-50
बैंकिंग शब्दावली		17-50
आन्ध्र प्रदेश में हिंदी-शिक्षण की समस्याएं		17-50
व्याकरण : सिद्धान्त और व्यवहार		36-00
कोश निर्माण सिद्धान्त और परंपरा		26-50
अन्य भाषा शिक्षण के कुछ पक्ष		15-00
प्रयोजनमूलक हिंदी व्याकरण		10-00
देवनागरी लेखन तथा हिंदी वर्तनी व्यवस्था		17-00
प्रेमचन्द और भारतीय साहित्य		23-00

गवेषणा

संस्थान की अर्द्धवार्षिक शोध पत्रिका––इसमें भाषा-शिक्षण, शिक्षा-शास्त्र, भाषा-विज्ञान और तुलनात्मक साहित्य के गवेषणापूर्ण लेख छपते हैं ।

संस्थागत—	प्रति अंक	रु० 8-00	व्यक्तिगत—प्रति अंक	रु० 4 00
	वार्षिक शुल्क	रु० 16-00	वार्षिक शुल्क	रु० 8-00

निःशुल्क सूची-पत्र और जानकारी के लिये लिखें या संपर्क करें—

प्रकाशन प्रबन्धक, केन्द्रीय हिन्दी संस्थान, हिन्दी संस्थान मार्ग, आगरा-282005.

4/1/8

Printed & Published by M.S. RAMAMURTHY, on behalf of the Association of Indian Universities,

University News

ANUARY 8, 1984

Re. 1.00

[illegible] Service
[illegible] 1984
[illegible] MYSORE

Dr. (Mrs.) Madhuri R. Shah, Chairman, UGC, delivered the convocation address of Sri Sathya Sai Institute of Higher Learning. Seen above with her are : Sri Sathya Sai Baba, Chancellor and Prof. V. K. Gokak, Vice-Chancellor of the Institute.

CLASSIFIED ADVERTISEMENTS

THE UNIVERSITY OF BURDWAN

RAJBATI : BURDWAN
WEST BENGAL

Advertisement No. 7/83-84
Dated : 21 December, 1983

Applications are invited for the following posts :

A. Development Officer, One Post. Scale of pay : Rs. 1200-50-1300-60-1900/-

B. Medical Officer : One Post. (for the University Health Centre) Scale of pay : Rs. 1200-50-1300-60-1900/-.

C. Assistant Librarian : One Post. Scale of pay : Rs. 700-40-1100-50-1600/-.

The posts carry dearness and other allowances, and pensionary benefits according to the Statutes of the University.

For the post of Medical Officer Non-practicing allowance as may be prescribed by the University from time to time will be admissible in addition to other allowances.

Educational Qualifications & Experience:

For post indicated at A

(a) **Essential**

(i) Uniformly good academic record with a B+ Master's Degree.

(ii) At least 7 years' experience in a position involving supervision, control and planning of administration of Colleges, Universities, Institutes of Higher Learning or Government or Quasi-Government organisation.

(iii) Age not below 35 years. Relaxable in the case of exceptionally qualified candidates.

(b) **Desirable**

(i) A Doctorate Degree or published work of high standard.

(ii) Experience of at least 7 years in University or in Post Graduate Research Organisation as Assistant Registrar or equivalent post. In that case, records of performance will be examined.

(iii) Competence to formulate proposals for development of University Teaching Departments and Colleges.

For post indicated at B

(a) **Essential**

(i) An M.B.B.S. Degree recognised by the I.M.C.

(ii) At least 10 years' experience of medical practice in a Government/Military/Quasi-Government hospitals.

(iii) Age not below 35 years. Relaxable in the case of exceptionally qualified candidates.

(iv) 10 years' experience in hospitals may be relaxed in case of private practice or reputation for 15 years.

(b) **Desirable**

Postgraduate Degree (M.D./M.R.C.P. in Medicine or equivalent qualifications) in any of the branches of the Medical Science or Diploma in Public and Tropical Medicine.

N.B.: The post of Medical Officer is a non-practicing one and the appointee shall be required to reside in the campus of the University.

For post indicated at C

(a) **Essential**

(i) Uniformly good academic record with a B+ Master's Degree with a Bachelor's Degree in Library Science or a Master's Degree in Library Science.

(ii) At least 5 years' experience in a recognised Library preferably belonging to University or a Institute of Higher Learning.

(iii) Age not below 30 years. Relaxable in the case of exceptionally qualified candidates.

Provided that in the absence of suitable candidates having the required administrative experience, the essential qualifications pertaining to administrative experience required for the posts may be reduced or waived on the recommendations of the Selection Committee if the candidate has been either a Professor/Reader/Principal for at least two years. For candidates having the required administrative experience, the essential academic qualifications may be relaxed on the recommendations of the Selection Committee but the selected candidate must have at least the academic qualifications prescribed for teachers of Colleges.

The choice of the Selection Committee may not necessarily be confined to those who apply formally.

For application form and other information apply to the Registrar with a self-addressed stamped (60 paise) envelope (9" x 4") with the requisite fee of Rs. 5/- within **20th January, 1984.**

A. K. Chaudhuri
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY

P.O. IIT, POWAI, BOMBAY-400 076

Advertisement No. A-166/83

Applications are invited on plain paper for the Research Associateships in the Departments of Mathematics and Chemistry of this Institute giving mailing address, date of birth, academic qualifications and experience, if any, with copies of certificates, testimonials etc. Associateship is tenable for a period not exceeding 3 years on year to year basis. The qualifications, age limit etc. are given below:

Completed applications should reach the Registrar, Indian Institute of Technology, P.O. III, Powai, Bombay-400 076 on or before **20th January, 1984.**

Departments of Methematics & Chemistry

Position : Research Associate

Age : Below 35 years (below 45 years in the case of SC/ST candidates).

Research Associateship : In the range of Rs. 1100 to Rs. 1500/- p.m. (consolidated).

Contingency Grants : Rs. 3,000/- per annum.

Qualification : For Deptt. of Mathematics : Ph.D. in Mathematics with Thesis in the domain of Functional Analysis/Approximation Theory.

Publications in reputed journals desirable.

For Deptt. of Chemistry : Ph.D. in (a) Theoretical Chemistry or (b) Theoretical physics, with experience in computer programming and numerical methods. Publications in reputed journals desirable.

Proposed Area of Study

For Deptt. of Mathematics : (a) Approximate eigen values of perturbed Hamiltonians,

OR

(b) Variational Analysis, spline functions and quantum field theory.

For Deptt. of Chemistry : Density functional and/or hydrodynamical theories of many-electron systems.

REGIONAL ENGINEERING COLLEGE

SILCHAR (ASSAM) 788 010.

Advertisement No. 3/83

Applications are invited for the following posts:

1. Assistant Professors of Civil Engineering/Electrical Engineering (including Electronics).

Scale of pay: Rs. 1200-50-1300-60-1900/- P.M.

Qualification & experience : A good academic record with a Doctor's degree in a relevant field. About 5 years experience of teaching and/or research and development. Provided further that candidates not possessing Ph.D. may be considered if they have to their credit equivalent research published work or design/development work of a high order either in the institution or in an industry.

OR

In the case of persons to be recruited from industry or professional fields, candidate should possess good academic record with recognised professional work of about 7 years which should include innovation and/or research and development.

Specialisation : In any one or more of the following fields :

Asstt. Professor of Civil Engg.: Structural Engg./Highway Engg./Water Resources Engg/Surveying.

Asstt. Professor of Electrical Engg.: Electrical Machines/Electric field theory/Power System/Electric drives/High voltage Engineering/Communication Engg./Micro-wave Engg/Instrumentation technology/Radar technology/Industrial Electronics/Microprocessor techniques/ Circuit Theory.

Application in plain paper (typed) giving full bio-data and particulars of publications together with an I.P.O. of Rs. 10/- (ten) should reach the Principal, Regional Engineering College, Silchar-788 010 by **23rd January, 1984.**

2nd class railway fare by the shortest route will be admissible to the candidates for up down journey for appearing in the interview. D.A. not admissible.

N.K. Choudhury
PRINCIPAL

20 JAN 1984

UNIVERSITY NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :

M.S. RAMAMURTHY

AIU Diamond Jubilee in 1985

The genesis of the Association of Indian Universities is to be traced back to the conference of the Vice-Chancellors of the Universities convened by the Viceroy of India at Simla in May 1924. The conference suggested that it would be advisable if the universities come together on a common platform to dissuss their problems. The Inter-University Board was subsequently formed in March 1925. The name was subsequently changed to Association of Indian Universities (AIU) in 1973.

The Association of Indian Universities would be sixty years old in 1985. The President, Prof. R.C. Paul, Vice-Chancellor, Panjab University has constituted the following Committee to plan the Diamond Jubilee Celebrations of AIU in 1985: Prof. Rais Ahmed, Vice-Chairman, UGC; Prof. Gurbakhsh Singh, VC, Delhi University; Prof. P.N. Srivastava, VC, JNU; Dr.H.K. Jain, Director, IARI, New Delhi; Dr. N.M. Swani, Director, IIT, Delhi; Shri Kanti Chaudhuri, VC, Jabalpur; Dr. P.V. Indiresan, Director IIT, Madras; Dr. K. Gopalan, VC, Cochin; Dr. R.G. Takwale, VC, Poona; Dr. A.K. Dhan, VC, Ranchi; Dr. R.S. Mishra, VC, Lucknow; Dr. Sukhdev Singh, VC, PAU, Shri M.R. Kolhatkar, Jt. Secretary, Ministry of Education and Shri Man Mohan Singh, Financial Adviser, Ministry of Education.

The first Meeting of the Jubilee Committee was held at Annamalai University on December 10, 1983. Dr. J.S. Grewal, VC, Guru Nanak Dev University, Prof. S.V. Chittibabu, VC, Annamalai University, Dr. Amlan Datta, VC, Visva Bharati, Prof. K.S. Hegde, VC, Mysore University and Dr. G.P. Sinha, VC, Patna University were also invited to attend the Meeting.

The Diamond Jubilee Celebrations of the Association be jointly organised by the member universities located at Delhi, viz. JNU, Delhi University, IIT, AIIMS, IARI and School of Planning & Architecture. In addition to the Vice-Chancellors and Directors of Institutes, senior academics from member organisations be also invited to participate in the programme. Subjects pertaining to University Education may be taken up for discussion and an international seminar on "Crisis in Higher Education" be organised.

A distinguished educationist/scholar be invited to address the Diamond Jubilee Session. Fellowships in higher education be instituted by AIU for research in any branch of higher education. Joint Meetings with the Bar Council, the Medical Council of India, ICAR, ICMR, UGC, CSIR, DST, Department of Sports, ICHR, ICSSR and Indian Council of Philosophical Research may be arranged for discussing problems of common interest in the field of higher education. Discussions may also be arranged with the Union and State Public Service Commissions to identify areas where the Association could be of greater assistance to the Public Service Commissions. The P & T Department of the Government of India be approached to issue a special postage stamp to mark the completion of sixty years of service of AIU in the field of higher education.

The Association may set up a Foreign Students Cell to provide closer liasion with the Indian Council of Cultural Relations and the Ministries of Education and External Affairs for administering schemes for foreign students studying in Indian universities. The Department of Sports, Govt. of India, be also approached to assist in organising items of International Sports at this occasion. Cultural competitions on zonal basis could also be organised. The Finals of such competitions be held in Delhi to synchronise with the Annual Session. It was also decided to up-date and revise the History of AIU which was published at the time of Golden Jubilee in 1975.

It is hoped that the construction of AIU House would be completed by that time so that it could be formally inagurated at the time of Diamond Jubilee Celebrations.

The Standing Committee of AIU while approving these proposals in principle has suggested that some of the activities be taken up immediately and the Jubilee Committee proceed with the planning and organisation for the jubilee functions.

Case for a Merit Examination on a National Basis

K. Gunasekaran*

Way back in 1966, the Education Commission (1964-66) had visualised a Central Testing Organisation (CTO) in India. In its report it had recommended to the UGC the setting of such an organisation. One of the objectives of CTO, as given by the Commission, is "to provide the necessary services to colleges and universities such as administering selection tests, supplying the test results and suggesting ways and means of utilising the results for selection".

The other major objectives as conceived by the Commission are : (a) to develop procedures for selection at various levels for various courses and (b) to promote research in this area. The UGC in its Plan of Action (1973) had mentioned, "it appears that in the initial phases the best agency to set up machinery for the National Examination is the UGC, particularly in view of its responsibility in respect of maintenance and coordination of standards. But, the volume of work as also the necessity to conduct research and investigations in the field of evaluation would perhaps require that in the long run this should become a separate sub-agency under the UGC". But, to date neither a CTO has been set up nor a National Merit Examination (NME) conducted. The following are some of the reasons why NME is necessary.

(1) At present, as different Boards of Education and Universities are following different patterns of education it becomes difficult for the agencies to recruit/admit the students on a common ground. The best solution to this problem is to have an admission test of a standard. Again such a test would lead the students to take too many admission tests if they wish to apply for different courses. Further, some institutions may not be in a position to conduct an admission test.

In this context, the National Merit Examination (NME) will prove to be a boon both to the students and the institutions. It will be beneficial to the students in the sense that they need to take only one common examination. For the institutions, the benefit is two-fold. First, they need not undergo the ordeal of conducting the examinations. Secondly, the students coming from different backgrounds are tested on a common standard.

(2) At present, a student has to take too many competitive examinations apart from his Board/University examinations. After completing his higher secondary course if a student wants to join a professional college, he has to sit for the admission tests of all the various colleges which run the course. A graduate, in some universities, has to sit for admission test to join a post-graduate course. The postgraduate students also have to pass examinations if they want admission for higher courses in the IITs or get scholarships from institutes. A common examination would eliminate all these problems.

(3) Studies done by Barrow (1971), Dandekar (1968), Hossain (1940), Misra (1971), Harper (1971) and Bora (1973)—to mention a few have amply shown how the results would be if scaling of marks is not done. But as per the information available with the Association of Indian Universities, no university/institute in the country is adopting randomisation of scripts and scaling of examiner's marks which is a most crucial process for comparison of the performances of the students from different disciplines within a University. At present the marks obtained by the students in the Higher Secondary Board/University examinations, is used to a large extent to admit the students without realising how erroneous it is. For want of any other information about the students, probably this is the only course left to the institutions. The NME will take care of this problem too.

(4) While the UGC has been branding the universities as 'developed', 'under-developed' and 'developing' in terms of physical facilities available, no effort has been made to quantify the standards maintained by the different universities. One could get a vague idea of the standards of a university only from the Civil Service Examinations conducted by the UPSC. As only few candidates of a university apply for UPSC, the conclusions drawn are limited. The NME, if conducted throughout the country compulsorily, can give a clear picture of the standards of different school boards/universities. The information received through the examinations may be passed on to the Universities for necessary action. By conducting this examination, UGC will be fulfilling one of its major functions as laid down by the UGC Act of 1956 which states "....all such steps as it may think fit for the promotion and coordination of University education and for the determination and maintenance of standards of teaching, examination and research in universities".

It is suggested that the examination may be conducted at three levels viz; (1) higher secondary level, (2) graduate level and (3) post-graduate level. This is in consonance with the recommendations of the Education Commission (1964-66) which stated, "the search for talent must be a continuous process, pursued at all stages, but the secondary stage is the most crucial". At present, the NCERT is conducting a National Talent Search (NTS) Examination to award scholarships for talented students. (The students of X and XII standards are eligible to sit for this examination). The search for talent should not stop at the higher secondary stage only. It should continue to the graduate and postgraduate levels.

**Research Officer (Exams),*
AIU, New Delhi.

Apart from identifying talent, the results of the examinations can be used for a variety of purposes like (1) helping the institutions to admit the right type of students for graduate/postgraduate courses; (2) comparing the standards of the students coming from different streams of education at various levels; (3) eliminating the drudgery of the students in facing too many competitive examinations (apart from their regular school board/university examinations); (4) presenting feedback information regarding the standards maintained by the institutions/ universities; (5) identifying the talent at the graduate and post-graduate levels and nurturing it by offering adequate scholarships; (6) bringing down the expenditure in conducting the examinations by different agencies as it is being done now if centralised duplication of work can be eliminated; and (7) carrying out research in this area.

Before concluding, it is worthwhile to quote similar testing programmes conducted in other countries. In the USA, from 1958 the most ambitious testing programme is administered by the National Merit Scholarship Corporation. In that year, the Corporation distributed over $ 5,000,000 as awards to high school graduates. In the same year, almost 500,000 high-school juniors and seniors took the qualifying tests. The final award of scholarships was based upon their performance in the College Entrance Examinations Board (CEEB) tests and on factors the evaluating panels choose to consider.

Other less extensive scholarship testing services have been developed and offered to the public by the College board, the Educational Testing Service and the Psychological Corporation. With the bumper crop of 'war babies' hitting the colleges in the 60's and with limited spaces to accommodate them, screening of applicants became an even more hectic undertaking. Much of the testing for admissions was done for the colleges by one of several independent testing agencies. The oldest and best known of these is the College Entrance Examination Board (CEEB). The Board was started in 1900 to administer entrance tests for a limited number of 'Ivy League' colleges. The CEEB administers its tests at testing centres all over the world. Papers are centrally scored and the results reported to the colleges, the individuals to his designated school and to the individual himself. Generally, these tests are taken by the students during his senior year in high school.

Finally, there are various programmes for admission to graduate schools or professional schools. The most widely used admission tests for graduate schools are the Graduate Record Examinations (GRE) administered by the Educational Testing Service (ETS) and the Miller Analogies Test (MAT) administered by the Psychological Corporation. Special tests are used by professional schools in such fields as law, medicine, dentistry and accountancy.

Thus, the concept of NME can be developed on the basis of other countries experience where similar testing programmes are working well. □

[Courtesy : The Hindu]

Prof. S.K. Khanna takes over as Secretary UGC

Prof. S. K. Khanna

After more than twentyfive years experience of teaching, research and administration in Engineering Education, Dr. S.K. Khanna has taken over as Secretary, University Grants Commission on January 2, 1984. For his valuable contributions in the field of Transportation Engineering, he has been the recipient of several awards including Sir Arthur Cotton Memorial Gold Medal (1978) and Indian Roads Congress Annual Award (1978). He is a fellow of the Institution of Engineers, a member of several other professional bodies and has been a Council Member of the Indian Roads Congress. He has published three books and 135 research papers in India and abroad. He has supervised 14 Doctoral and 90 Master's degree candidates for their theses at the University of Roorkee, which is internationally renowned in the field of Civil Engineering.

In 1977, Dr. Khanna was invited to the Fourth International Conference on Structural Design of Asphalt Pavements at Ann Arbor, U.S.A. In 1980, he was invited to chair a Session at the World Conference on Transportation Research in London, U.K. In order to organise the training programmes of foreign students at University of Roorkee, Dr. Khanna visited Tanzania and Nepal in 1981. In August 1982, Dr. Khanna presented a research paper at the Fifth International Conference on Pavements in Netherlands. In June 1983, he was a member of the delegation to Nepal for strengthening the Institute of Engineering at Kathmandu.

Before joining as Secretary, U.G.C., Dr. Khanna has been working as Dean, Development and Planning and Head of Civil Engineering Department at the University of Roorkee. As Dean, he has been responsible for the formulation of the Fifth Plans of the University and the follow-up work with U.G.C. and State Govt. for their implementation.

The Universtiy News and AIU wish Dr. Khanna all the success in his new assignment at UGC.

II Convocation of Sri Sathya Sai Institute of Higher Learning

The Second Convocation of Sri Sathya Sai Institute of Higher Learning was held on 22nd November, 1983 at 4.45 p.m. Dr. (Shrimati) Madhuri R. Shah, Chairman, University Grants Commission, was the Guest of Honour, who delivered the Second Convocation Address. Vice-Chancellor Professor Gokak welcomed the gathering and Bhagavan Sri Sathya Sai Baba, Chancellor of the Institute, presided over the Convocation. The spacious auditorium at Prasanthinilayam was packed to capacity by the audience of about twenty thousand men and women. There were several thousands, who stood outside listening to the proceedings)

Summary of Prof. V.K. Gokak's Welcome Address.

Vice-Chancellor Professor Gokak introduced Dr. (Shrimati) Shah as a forward-looking Chairman, who wanted to replace the old colonial system of education by a truly national system.

The Sri Sathya Sai Institute had started with clear motives as its sheet anchor. It advocated a world view, which was not theological or scientific humanist but mysticla, containing both Science and God, the Finite and the Infinite. It has Five-year integrated courses for its M.A., M.Sc., M. Com Degrees, so that the gaps and wasteful repetitions did not remain in the course as they do in the 3 plus 2 year scheme of study. The Semester system has been adopted. Modern syllabuses, which have been brought up to date were divided into clear spheres of study for Semester purposes. The methods of teaching by way of lectures had been diversified by introducing seminars, workshops, and inter-disciplinary approaches. New evaluation procedures are being introduced, with Question papers reflecting and concentrating on the objective and skills of the course, with a comprehensive and compulsory coverage of the syllabus. Short and long objective type of questions were freely used and monthly tests and semester-end tests leading to cumulative reading at the end, were made current at the Institute. Internal evaluation was modified in some measure by the external examiners each year. Each course began on a broad base with five awareness courses, two elective courses, two languages and three core subjects. This gradually tapered as it went along and culminated in the study of one subject in the third year and a study of all the branches of that subject during the last two years, till research in Ph.D. resulted in an intensive study of a topic chosen from the specialist subject.

Prof. V.K. Gokak delivering the Welcome Address

While the above was the academic aspect of the course the course at the Institute had also a moral and spiritual aspect. Practically all the students are residential so that student life in the hostel can be easily coordinated with life in the Campus. Each day began with early morning prayers (5.30 A.M.) and meditation. Participation in sports was compulsory because good health is the foundation of the spiritual life. Students practise yogasanas or play games each day. Life in Campus began with a universal prayer and a talk on the Unity of Religions for a quarter of an hour, there being readings from one of the great religions of the world each working day. The good behaviour of students towards elders, teachers and fellow-students was insisted upon. Social work was compulsory with 6 hours each month in available contexts, village development, cleaning of Campus precincts, mending roads and digging soakpits, etc. A section of the social work programme is characterised by self-reliance activities, such as students volunteering to work in the kitchen, the dining hall, the hostel cooperative stores and the dispensary. Students were encouraged besides to participate in cultural activities relating to elocution, literature and other fine arts, cultural films, etc. Certain criteria had been evolved for all these items of work and student achievement in this field was assessed. Marked in the relation of 50 to 100 were reserved for all these items together. Student achievement in the moral and spiritual field is duly entered in the Degree certificate along with academic achievement. All this was possible because students gave their time freely [illegible] the Institute for its proper utilisation.

Convocation Address by Dr (Mrs) Madhuri R. Shah, Chairman, University Grants Commission : A Summary.

It gives me deep satisfaction that I have been a *nimittamatra* in setting up of this Deemd University, which I can say with definite certainty and pride, will be a pace-setting institution for the future of higher education which will not only give knowledge of the scientific and technological advancement in the world but will give the world good men and good women. The multivarsities of today are straight line projections of the machine-model quality and universities of the industrial era. However, with its own technology and its techniques for accelerating technological innovation, the industrial system has begun to transform itself. A new cultural system is emerging.

Nevertheless, the university system in our country has, since its inception, been true to its original purpose, mentioned in the despatch of 1854, namely that of diffusion of European knowledge. It did not waver from its prescribed course in spite of the excitement of national upsurge and the struggles for freedom.

Academic attitude and tradition, habits of thought and behaviour, loyalty to the language and culture of the West assiduously cultivated for more than a century and a quarter and reinforced by spectacular revolution in the West in the realms of science and technology, together with the means of communication, have entered into the fabric of education. Macaulay is ahead in the race. His dream of the educated Indian has come true.

The price which this nation had to pay for the new academic culture and taste is not noticed by many. Alienation with whatever is vital in Indian thought and culture is almost total. In recent years there is a growing demand for reversing this trend and for giving Indian thought and culture its rightful place in the universities with a view to provide them its identity in the national field.

The older conventional universities find it very hard to rethink and reorient their rules. Attitudinal changes in institutions like the universities are bound to be tardy and considerably slow, inhibited by the continuing crisis relating to discipline which demands all attention and immediate decision having no time for proper initiative for fundamental changes. It is in this situation that universities such as the Sathya Sai Institute of Higher Learning which are unhampered by awkward tradition and set style of functioning should provide awakened leadership and try to become pacesetters.

Education, true and real education, must ennoble life and help the understanding of eternal value. The Sathya Sai Institute combines the best in the country —science and modern technology together with inculcation of those values which are ever-lasting for mankind. The Sathya Sai Institute of Higher Learning has launched 5-year integrated courses of high quality and given special care to the youth, acquiring awareness of the problems which confort the world and society. The Institute also endeavours to build in the minds of youth the spirit of service to the society as part of duty, as part of the means for cultivation of love and understanding for the humankind. Only those who have gaind confidence in their whole identity and direction can create healthy future goals for society, the challenges to develop future-oriented self-directed learning. Under the inspiring guidance of the Chancellor. Paramapujya Sai Baba, the fortunate teachers and the students here have been continually receiving enlightement and strength to meet the very complex difficult task of growing up and of learning.

I heartily congratulate those who have received diplomas and distinctions. Solid gold is difficult to come by these days. It is very gratifying for me to see that Sathya Sai Institute does not present gilt-edged gold medals but solid gold which will last you a lifetime. You are the privileged ones to have received education in this great institution. It is your duty to pay your debt to the society, by serving it to the best extent possible in whatever sphere of life you may happen to work.

You must change your mind to change your world. Change demands self-discipline. Command yourself and make yourself do what needs to be done. Change can be achieved by changing your environment. Let go of lower things and reach for the higher. Concentrate on becoming the man or the woman you want to be. The Sri Sathya Sai Institute of Higher Learning has given you the canvas, the paint, the pigments and brushes, the spiritual strength and moral values. Each one of you will have to paint your own picture according to your own creativity and imagination and then what you paint for yourself will be a masterpiece and life would become a wonderful experience.

Dr. (Mrs.) Madhuri R. Shah delivering the Convocation Address

Benedictory Address by Chancellor Bhagavan Sri Sathya Sai Baba : A Summary

Chivalry of speech has increased;
Chivalry of deed has disappeared;
Life is laden with false vanities;
This is the life the modern student leads today.

Money has become our God;
Pride has become our creed;

Selfishness sits supreme in Buddhi's seat;

Egotism has become our fashion;
Greed has become our beauty;
Dharma has come to nought;
Compassion has sunk low;
Moral fervour is lost;
Hypocrisy has become the light of our life;
Love and kindness lie sick and diseased;
Modern education has blinded men with lust;
Life has become a burden;
Minds have gone astray.

Delay no more for delay is disastrous;

Fuse morality with education in sweet harmony;

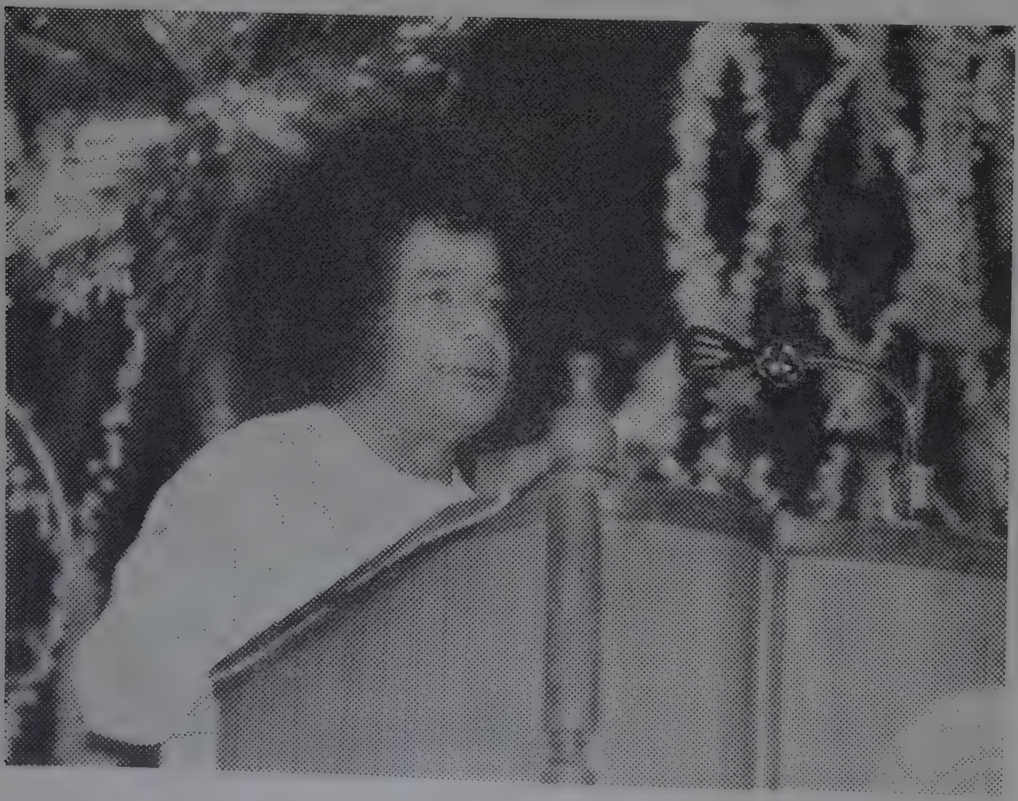
And see what happens, O Smt. Madhuri Shah!

Students and Educationists, who are the embodiments of Love!

What is education? what kind of education should we seek? What is the true measure of education? What kind of education fosters the well being of humanity at large? What good has the current system of education done? He indeed is the wise one who focusses his attention on these five aspects of learning and obtains the right insight into the true nature of education.

Education without purification of one's personality is like a kite whose twine has snapped. No one knows for certain where such a kite falls—on a bush or a briar. It is not the acquisition of education that matters much. What is most essential is the cultivation of samskaras along with your education.

Due effort should be made to develop in the student the skills of teaching at the post-graduate level. It is during the postgraduate period that proper training in the art of teaching has to be imparted to students. Many have received their Ph.Ds without ever obtaining any skill in the art of teaching. At least once or twice in a week students should be given training in the cultivation of teaching skills.



Sri Sathya Sai Baba delivering the Benedictory Address

Instead of holding elections fo the selection of a leader, the bes all-rounder amongst the students should be chosen as the leader. Elections fill the students with hatred for one another. It doesn't stop with them, but descends down on the fresh batches of students that enter the portals of an institution. Love and affection should be fostered in the students; the feeling of oneness has to be instilled in them; and the feeling of fatherhood of God and brotherhood of man has to be nurtured. Love will start welling up the day we suspend the elections in our institutions.

No good accrues without discipline should mark every Discipline aspect of our life.

The knowledge that we obtain in the present educational system is more extensive than intensive. We learn too many things but our knowledge of these things is too shallow. It is the mark of right education to know a few things intensively and deeply. Learn a few subjects but learn them well instead of learning many without mastering even one. It is thoroughness that lends strength to our knowledge.

Which of these two is more important—success in the examinations or success in daily life? We should in fact take these two aspects as the two wings of a bird, as the two wheels of a chariot. We must blend education and life in one sweet harmony.

We now-a-days give credence to intelligence discounting the importance of character. Character should keep pace with the advancement of intelligence. The development of intelligence without a corresponding development of character is an exercise in futility.

Plunge into the service of society and extend help to your fellowmen. Do not turn yourself into a beast by harbouring selfishness. Cheer up saying to yourself "How soon the day will come when I finish my studies and serve my fellowmen in the society". □

BHU holds International Symposium on Light Metals : Science and Technology

The Department of Metallurgical Engineering, of the Banaras Hindu University, started in 1923, as a part of its Diamond Jubilee celebrations, organised recently the 21st National Metallurgists' Day, the 37th Annual Technical Meeting of the Indian Institute of Metals and an International Symposium on "Light Metals: Science and Technology". More than 350 participants, including a dozen from overseas, took part in the celebrations.

The International Symposium on "Light Metals : Science and Technology" (LM : ST) was organized firstly to take stock of the ore processing, extraction, structure--property correlations, working, applications and recent developments in Aluminium, Titanium, Magnesium and Beryllium. The second purpose was to let the scientists outside Varanasi know the extensive and varied aspects of the work related to Aluminium and Titanium being carried out in the Department.

A total of 22 papers were scheduled for presentation at the Symposium spread over three days. In the first session conducted on the afternoon of November 14, 1983 five papers were presented. Dr. J.E. Harris (Central Electricity Generating Board, Berkeley, UK) talked about the development and use of magnesium alloys in U.K. nuclear reactors and outlined how science had aided in developing the technology in an elegant fashion. Dr. P. Rama Rao (Defence Metallurgical Research Laboratory, Hyderabad) explained the various research programmes undertaken by DMRL and showed how DMRL is engaged in the basic as well as applied aspects of the science and technology of the wonder metal, Titanium. Shri Ch. Sridhar Rao (DMRL, Hyderabad) narrated the experience of DMRL in setting up the 100 tons per year titanium sponge experimental facility. Dr. Vakil Singh (Banaras Hindu University, Varanasi) discussed the structure-property correlations in some of the aerospace Titanium alloys forming part of the work carried out under a sponsored research project. The last lecture in the Session was by Professor K.I. Vasu (Indian Institute of Science, Bangalore) who discussed some of the less understood aspects of strengthening in aluminium alloys.

There were two sessions devoted to the Symposium on November 15, 1983. Dr. K. Solymar (ALUTERV-FKI, Budapest, Hungary) discussed the recent trends of technological development in alumina production and showed some of the Hungarian results in this area. This was followed by another presentation by Shri O. S. Chaudhry (HINDALCO, Renukoot) on methods to save energy on 1940/1950's pots without involving major modifications. Professor P.M. Prasad (BHU, Varanasi) talked about the Recent Developments in Red Mud Processing and explained how the presently unusable red mud — a waste from aluminium industries — can be put to several uses. Shri B.P. Sharma (Bhabha Atomic Research Centre, Bombay) explained the salient features of the pilot plant production of beryllium metal and copper beryllium alloys in India. The last lecture on this day was by Dr. J. Horvath (ALUTERV-FKI, Budapest, Hungary) on their efforts for increasing energy efficiency of aluminium electrolysis. A paper on Extractive Metallurgy of Magnesium was presented by Dr. K.S. Rajagopalan (CECRI, Karaikudi).

Two more sessions were organized for the Symposium on November 16, 1983. Professor P.H. Shingu (Kyoto University, Kyoto, Japan) discussed the phenomenon of Rapid Solidification and the resultant metastable equilibria in light metals and showed how thermodynamics can help in predicting the metastable behaviour. This was followed by another lecture on developing high strength aluminium alloys through rapid solidification processing by Professor T.R. Anantharaman (BHU, Varanasi). Laying emphasis on the basic principles of rapid solidification, he showed how the strength of aluminium alloys can be increased through supersaturation and precipitation processes. Dr. Rajendra Kumar (National Metallurgical Laboratory, Jamshedpur) described the process of developing aluminium alloy conductors at the National Metallurgical Laboratory and explained the advantages of these conductors over the conventional ones. Dr. A. Bose (IIT, Kharagpur) talked about the powder metallurgy of aluminium alloys and described the advantages and disadvantages of this novel fabrication route. The last lecture in the session was by Dr. S. N. Tiwari (BHU, Varanasi) who described the development of aluminium alloys as plain bearing materials.

Discussions followed the presentation of each paper. The Proceedings of the Symposium will be published shortly.

Drowning tragedy strikes IU Athletic Meet

Pradeep Kumar Khullar, a member of the Delhi University Athletic Team to the All-India Inter-University Athletic Meet held at Trivandrum recently died in a swimming accident at Kovalam on 28th December, 1983. Last respects to Pradeep Kumar Khullar were paid by the athletes when his body was kept in the Kerala University Stadium Pavillion. Later his body was flown to Delhi.

New Pattern of Legal Education

M.L. Upadhyaya*

The Bar Council of India, on the advice of its Legal Education Committee and in consultation with the Law Panel of the University Grants Commission, has been considering various schemes to reform the existing system of Legal Education. In 1978, the Council decided that the minimum qualification for admission to a law course be lowered from a University degree to that of a pass in the Higher Secondary Examination in the 10+2 system. It also decided that the duration of the law course for those joining the Law College after Higher Secondary Examination should be four years. However, the graduates should be admitted to the second year class of the four year course. It proposed that in the first year of the four-year course, a few social science and humanities courses should be taught and in the next three years the law courses taught in the existing law courses should continue to be taught. The draft scheme when circulated to us for our comments was not accepted by us in this form. We suggested that this was a good opportunity to reform and restructure the existing LL.B. Course and syllabi and if we teach twenty four law papers in the proposed four year course instead of the eighteen courses in the existing course, we would be able to include many new but socially relevant and useful courses.

Be that as it may, the Council circulated in May 1982 a new pattern of Five year course for implementation from June, 1982 or latest by June, 1984. An analysis of the new scheme revealed that it was a case of lost opportunity. Indeed a very good opportunity to reform and restructure the system of legal education was lost. Since the scheme had been duly accepted for implementation by the Council, it was not open to universities to negotiate for any change therein. Being mandatory in nature, the Universities accepted the scheme in principle and assured the Council to take steps to implement the same by 1984.

The University of Calcutta did likewise. The Law Faculty approved the Regulations for the new course in May, 1983 and the syllabus was approved in November, 1983. The admissions for the first batch will be made in December, 1983 and if all goes well the teaching for the new course will start from January, 1984.

The present writer expressed his views on the inherent weaknesses of the new pattern elsewhere. He also presented a paper in a seminar held at Patna University. The seminar among other things, urged upon the Bar Council of India to revise the scheme so as to reduce the duration of the course to four years, prescribe only law courses for all the four years, include new socially relevant and otherwise professionally useful courses, allow graduates to be admitted to the second year of the course and make sound arrangements for practical training to be imparted under the aegis of the Bar Council of India and the State Bar Councils.

The Law Panel of the University Grants Commission and the Commission itself invited the Bar Council of India to discuss certain problems concerning implementation of the new scheme. The Commission felt that in a matter like this the Government of India should also be suitably apprised. Accordingly, the University Grants Commission felt it necessary 'that Universities be informed that the question of adopting the five-year integrated course after 10+2 is still being discussed with the Bar Council of India and the Government of India.'

This is where the matter stands as far as the Commission is concerned. The Vice-Chancellors of all the Universities in Uttar Pradesh in their meeting with the Chancellor in Lucknow rejected the new pattern and refused to implement the same in their universities. The Government of Tamilnadu by issuing a general Government order implemented the new scheme from November, 1983. Several other universities implemented it from July, 1983. Others are preparing to do so by July, 1984. The Bar Council of India has reminded all the Universities of their obligation to do so by June, 1984 or else face the consequences of losing recognition for their degrees for the purpose of enrolment at the Bar. A perfectly chaotic condition indeed.

In all my early comments on the new scheme, I have adopted a constructive approach and made suggestions of making the best of a bad bargain. I suggested that the duration of the course be reduced

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**Professor & Head of the Deptt. of Law, Calcutta University, Calcutta.*

to four years after 10+2 and three years for graduates, teach only law papers for four years or three years as the case may be, leave practical training to the profession where universities may help in examination and evaluation but make the system serious, full-time and truly meaningful. The Council has completely ignored the last mentioned objectives. It has left the practical training to the colleges which are not well equipped to impart it. The goal of converting all evening and morning colleges into whole-time day colleges, which the Council had been pursuing for many years has been sadly given a go by in the new scheme. The requirements as to a separate and exclusive building for the Law College and a well equipped Library, and whole-time teachers with qualifications prescribed by the U.G.C. and the universities received scant attention in the new scheme. There are permissive provisions in the scheme whereby people with right connection would be able to secure affiliation for a morning or evening college, with no building of its own, with no library worth the name, with whole-time teachers without a Master's degree in law who are engaged in active practice at the Bar in addition to whole-time employment in a morning or evening college. A perfect example of old wine in a new bottle. The old system with all its ills will continue in a new name. Hence the plea for a fresh look. □

Keller Plan :

A Personalized Instructional Design

Lalit Kishore*

Keller Plan

The Keller Plan, an instructional procedure started by and named after F.S. Keller—a first rank American psychologist, is a personalized and self-paced mastery learning system of instruction. In this instructional plan, the student works at a course broken into several small units at his own rate of learning. He must consolidate his ongoing unit before moving on to the next unit. The student must demonstrate his consolidation of the unit by a perfect or near-perfect achievement on a test taken by him whenever he feels ready for it. The failure in the test is not counted against the student and he may take the test over and again until he passes it.

Personalized Learning

Learning through the Keller Plan is personalized in two ways; one, it is student-directed, and second, it has the provision of individual guidance from the peers and the instructor. This kind of personalized instruction leads to efficient learning by the student. In this regard Gange observes, "this possibility of learner's own contribution suggests an even broader theme than any which have been specifically defined by learning theories......If one is concerned about how to make learning efficient, the focus of the emphasis must be the student. The design for efficient conditions for learning demands the learning to be conceived as an individual matter". Exactly this is the case in the Keller Plan. In this plan of learning, it is the individual and his pace of learning which are given the main importance.

Evaluation in Keller Plan

The Keller Plan involves explicit and well-defined behavioural objectives to be achieved by the student at the end of the course. Therefore, the instructional plan has an emphasis on a very thorough and systematic approach to students' learning and assessment. For this purpose, some specific criteria are fixed and students are evaluated with respect to those criteria only. According to Block, the evaluation in such an instructional plan must take place at three key points : (i) at the beginning (Prospective evaluation), (ii) during instruction (Formative evaluation), and (iii) at the end (Summative evaluation). Thus evaluation in the Keller Plan is continuous and enables the student and the instructor to chart progress towards the desired objectives of learning.

Rationale

If we want students to achieve the mastery of the subject matter, evaluation should become a tool to control the quality of instruction. The role of evaluation in the Keller Plan is to help students with their learning. When students are provided with a continuous progressive assessment with a provision for their correction by individual guidance, their performance on a summative examination is always better. According to Clift and Imrie, "The particular characteristic of the Keller Plan is the way in which the testing activity is built into the teaching . . . . . After each testing session the student receives feedback and thus each test becomes a part of learning experience."

Thus, the Keller plan with features like self-pacing, individual guidance, evaluation as an aid to learning and consolidation of learning, is any day better than the traditional methods of classroom instruction. □

**Research Fellow, Panjab University, based at MNSS, Rai.*

Academic Reforms at Devi Ahilya Vishwavidyalaya

The Devi Ahilya Vishwavidyalaya, Indore has restructured the courses at under-graduate level with effect from 1983-84. The courses in Arts, Social Sciences, Science, Commerce and Home Science Faculties have been restructured and have been made effective in all the affiliated colleges. The new syllabi of the courses have four components—foundation course, language course, core-subjects and applied components. The study courses are designed to create among the students awareness of the multi-faceted progress of the country and to produce in them a capacity to participate in the main stream of national life.

A panel of teachers from various disciplines has prepared a book known as "Bhartiya Chetna Aur Vikas" for being taught in the Foundation Course at the Part-I level. Another book on Science & Technology is under preparation for the Part-II students. Reading material for the Applied Components is also under preparation.

An Orientation course for teachers to acquaint them with the re-structured courses, the new methods of teaching and evaluation was held in June, 1983. The university hopes that the emphasis will now shift from teaching to learning and from lecturing to discussion.

Applied components have been evolved in various faculties keeping in view the needs of the region.

The Minimum Examination Reforms Programme, as proposed by the U.G.C., is being fully implemented by the University.

University examinations of 1984 for B.A., B.Com., B.Sc., B.H.Sc. Part-I classes will be based on Question Banks. Consequently Question Banks in 41 subjects for these classes have been published and are available in the market.

In the second phase, Question Banks in all the subjects in the Second Year classes would be prepared and would be operative from the March-April, 1985 examinations. A Workshop for question writers in all the 71 subjects will be held during the coming Summer Vacation.

The University has decided to introduce continuous internal evaluation system in all the University Teaching Departments from the academic session 1984-85. The scheme would be gradually extended to all the affiliated colleges of the University.

The University has prepared an Ordinance for introducing M.Phil courses in all the eligible University Teaching Departments and a few selected affiliated colleges in Arts, Social Sciences, Commerce, Science and Home Science faculties. These courses would be run on full-time basis or part-time basis or both, depending upon the facilities available to run this programme.

A sum of Rs. 10,000/- was sanctioned as seed money by the U.G.C. to the University. A detailed proposal, based on the survey work, has been submitted to the U.G.C. for sanctioning a department of Continuing Education and Extension work. With its establishment, educational and learning opportunities is expected to be extended to a larger number of people in the region.

Bombay Varsity workshop on 'Quantitative Techniques in Economic Analysis

The University Department of Economics, under its University Leadership Project in Economics (ULP), organised a 5-day Workshop on 'Quantitative Techniques in Economic Analysis (Elementary Level)' recently. Twenty five colleges from Bombay, Thane, Raigad, Sindhudurg and Ratnagiri districts deputed teachers in Economics for participation in the Workshop. The aim of the workshop was to provide an opportunity to teachers in Economics in the colleges affiliated to the University to come together and familiarise themselves with some of the basics of quantitative techniques as applied in economic analysis, keeping in view the empirical relevance.

After extending a hearty welcome to the participating teachers, Dr. J.C. Sandesara, Professor of Industrial Economics in the Department, briefly mentioned the main objective of the Workshop.

The syllabus for the Workshop was framed in consultation with the senior staff members of the Department and was so designed as to hold the interest of even those with no background in Mathematics or Statistics. The course-content comprised important topics in Mathematics and Statistics.

Besides broad outline of the course content of the topics to be covered at the Workshop, detailed work-notes were prepared on each topic in Mathematics and Statistics and were distributed to the participants.

In addition to the lectures by the U.L.P. academic staff, special guest lectures were also organised. Texts/Summaries of the Special Lectures had been supplied to the participants earlier. The workshop enabled the participants to gain insight into the various economic models, policies and problems.

The Department is now proposing to organise a similar Workshop in Goa and an advanced level Workshop subsequently in Bombay.

Seminar on Green Book at MD Varsity

The Centre for Third World Studies, Maharshi Dayanand University, Rohtak organised a Seminar on Third Universal Theory as contained in the Green Book of Colonel Qadhafi on 18th & 19th December, 1983. Sardar Khushwant Singh, the former Editor of Hindustan Times inaugurated the Seminar. He confessed his initial reluctance to go through the

Green Book of Colonel Qadhafi because of the adverse image disseminated by the captive Western Press. However, prior to coming to Rohtak, he went through the Green Book as many as three times and he found many of the ideas propounded by Colonel Qadhafi extremely logical and enlightening. In his opinion, the Green Book was most singular contribution to political philosophy after Karl Marx.

He found Qadhafi's criticism of representative democracy well founded and insightful.

In his keynote address, the Vice-Chancellor of M.D. University Mr. Hardwari Lal underlined the identity of the thoughts of the Green Book with those Indian sages and savants and thus considered them highly congenial for Indian milieu. He expressed the hope that the thoughts of the Green Book would be able to usher in a new world envisioned by the Poet Rabindra Nath Tagore in his poem, "Where the Mind is Without Fear".

Mr. Hardwari Lal laid threadbare the inadequacies of the reprensentative democracies prevailing in the world including U.K. and he supported Colonel Qadhafi's thesis that they were huge frauds in as much as they were a virtual dictatorship of a part over the whole.

According to Secretary of the Symposium, Dr. Madan G. Gandhi, it was a remarkable coincidence that the University named after Maharshi Dayanand should host this Seminar because the Vedic concept of Sabhas and Samitis as elucidated by Maharshi Dayanand forms the groundwork of People's Congresses and People's Committees enshrined in the Green Book.

In the first session which was Chaired by Dr. K.S. Hegde, Vice-Chancellor, University of Mysore, ten papers were read out and discussed on various aspects of the Green Book.

The paper reading session on the 19th morning was presided over by Dr. Hardwari Lal, Vice-Chancellor of M.D. University, Rohtak. Dr. Lotfi Farhat, a Libyan Scholar acted as intervener in the discussions and attempted to throw light on the practical implications of the Green Book for the countries of the Third World drawing upon his intimate understanding of the working out of this revolutionary model in Jamarihiya (Libya).

The evening session on the 19th was presided over by Dr. D.C. Verma, former Vice-Chancellor of Kurukshetra University and was marked by lively discussions.

Mr. Mansoor of Libyan People's Bureau complimented the M.D. University and its Vice-Chancellor, Dr. Hardwari Lal for hosting the Seminar on the Green Book.

UGC grants for Bihar Varsities

The Minister of State for Education and Social Welfare, Mrs Sheila Kaul, replying to a question recently in the Lok Sabha said that the total development grants paid to universities in Bihar during the last three years were: Bhagalpur University: Rs 58.75 lakh, Bihar University: Rs. 32.20 lakh. K.S.D. Sanskrit Vishwavidyalaya: Rs 19.18 lakh, L.N. Mithila University: Rs 4.05 lakh, Magadh University: Rs. 30.38 lakh, Patna University: Rs. 81.58 lakh and the Ranchi University: Rs 38.67 lakh.

Development grants are released by the Commission on the basis of the type and scope of programmes offered by the universities and the financial requirements to implement their proposals, as assessed by the visiting committees. In the case of the L.N. Mithila University, grants for institutional development are still to be provided as the requirements laid down in the rules framed under Section 12A of the UGC Act yet to be fulfilled.

Colleges are entitled to assistance from the University Grants Commission if they are recognised under Section 2 (F) of the UGC. Act, and have been declared fit under Section 12A of the same Act, where applicable. Further, a college has to fulfil the eligibility categories of programmes.

The Commission has sanctioned the grants to these colleges: B.M. College, (Rahika) Rs. 80,250; Mahakavi Kalidas Samarak Mahavidayalaya, (Chandauna) Rs. 7,27,582; and D.B. Mahavidayalaya, (Jayanagar) Rs. 1,22,400.

The Commission has sought some additional information from

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the B.M. College, and the D.B. Mahavidyalaya, (Jayanagar) as also from the Kalidas Vidyalaya Science College for considering their development schemes for under-graduate education.

Computer science courses t Bharathidasan University

The Regional Engineering College, Tiruchirapalli, an affiliated institution of the Bharathidasan University, has been requested by the Ministry of Education, Government of India, to conduct the post-graduate course in Computer Applications.

The Ministry of Education provides financial assistance to the tune of Rs. 5.00 Lakhs under the head 'non-recurring' and under the head 'recurring' for the posts of One Professor, two Readers and three Lecturers with a provision for Rs. 40,000/- per year for the supporting staff and Rs. 1000/- per student per annum as working expenses. The Bharathidasan University has granted affiliation for this new professional course in the emerging area of Computer Applications.

In the current academic year affiliation has already been granted for two colleges—St. Joseph's College, Tiruchirapalli and Nehru Memorial College, Puthanampatti—for offering 3-year B.Sc. Degree Course in Computer Science.

Request for the affiliation of the Master of Computer Applications (MCA) at St. Joseph's College, Tiruchirapalli, to mark its Centenary Celebrations is also under the favourable consideration of the University.

Cochin University chosen as nodal centre

Cochin University has been chosen as one of the 17 Nodal Centres of the National Manpower Information System, the establishment of which has been recently approved by the Government of India for the storage, updating, retrieval and analysis of manpower information to assist technical education planning in the country. The Lead Centre of the national system will be the Institute of Applied Manpower Research, New Delhi. A provision of Rs. 1 crore has been made for this purpose in the Sixth Plan.

The main objectives of the system are to estimate the short-term and long term requirements of different categories of engineering and technical manpower, to assess anticipated gaps in demand and supply, to collect and analyse data to match job requirements, and to provide forecasts of future needs indicating areas of growth and specialisation.

Other Nodal Centres in South India are the Indian Institute of Technology at Madras, the Indian Institute of Science at Bangalore, and the Jawaharlal Nehru Technological University at Hyderabad.

PG teaching starts in Dhanbad

Dhanbad entered into the field of post-graduate teaching when the Vice-Chancellor of Ranchi University Dr A.K. Dhan, recently inaugurated post-graduate teaching at R.S. Mor College, Govindpur by lighting candles and later in the P.K. Roy College, Dhanbad. While post-graduate teaching in Commerce will be conducted at Gobindpur, post-graduate teaching in Arts will be conducted at Dhanbad. The Vice-Chancellor announced that post-graduate teaching in Science would start at RSP College, Jharia from January 17.

The Vice-Chancellor said at Govindpur that he was considering to start post-graduate teaching in more subjects popular in Dhanbad district. Since there was no proper facilities in any college to conduct all post-graduate classes the teaching would be conducted in different colleges. But attempts would be made to centralise the teaching in due course at Dhanbad.

National Bo
Development Coun

Replying to a question in t
Rajya Sabha, Shri P.K. Thung
Union Deputy Minister f
Education stated recently th
the Government of India w
reviewing the National Book D
velopment Board in order to me
the crucial challenges in th
book publication. The new bo
will be called the National Boo
Development Council and i
functions, inter alia, will be :

(i) to lay down guidelines fo
the development of th
book industry in the con
text of the overall re-
quirements of the country;

(ii) to foster reading habi
among people;

(iii) to promote production of literature, specially relevant to children and rural illiterates;

(iv) to encourage authorship particularly in Indian languages and suggest measures for safeguarding the interests of the authors;

(v) to draft National Book Policy; and

(vi) to undertake and promote research, surveys, studies and special projects to help in the achievement of objectives referred to above.

Developmental biology training course

The Indian Society of Developmental Biologists with the Department of Science and Technology, Government of India is organizing a Developmental Biology Training Course for University and College teachers to familiarize them with the embryonic and postembryonic developmental stages of various animals, and to teach techniques for manipulating the same.

The course will be of one week duration and held at Allahabad in mid-March 1984. The number of participants will be restricted to a maximum of 20 only. The participants or their sponsoring institutions will have to bear the expenses for travel of participants but expenses incurred on laboratory materials and food will be borne by the organizers.

All intending participants are requested to write at their earliest and giving their biodata, to the Secretary, Indian Society of Developmental Biologists: Dr.Suresh C. Goel, Zoology Department, University of Poona, Poona 411 007.

Exhibition of paintings

Dr S.S. Sidhu, Advisor to Governor, Punjab, inaugurated a three-week exhibition of paintings by the renowned artist, Mr Sobha Singh at the Museum of the Punjabi University recently.

Speaking on the occasion, Dr Sidhu remarked "this is a peerless and marveleous attempt made by any Punjabi".

Dr S.S. Johl, Vice-Chancellor, Punjabi University, said that Mr Sobha Singh has been able to capture the true spirit of Sikhism in his paintings. The paintings will constitute a beautiful record of Punjabi culture for all times to come, he added.

More than 50 paintings, depicting the culture and heritage of Punjab have been installed in the museum.

UGC seminar at Saurashtra Varsity

Under the auspices of Department of History, Saurashtra University, Rajkot, a U.G.C. Seminar of an inter-disciplinary approach, entitled "The Impact of Political Change in Saurashtra in the Social and Economic Spheres : A.D.1802—A.D.1947", was organised from 25th to 29th November, 1983 by Dr. R.G. Parikh, Professor and Head of the Department of History. It was inaugurated by Prof. S.R. Dave, Vice-Chancellor of the Saurashtra University and presided over by Shri S.H. Desai, a scholar on the history of Saurashtra.

The Seminar which was the first of its kind organised in this region, was attended by 35 invited participants among whom were the college and university teachers, learned scholars as well as under-graduate and post-graduate students of different disciplines. Nineteen research papers concerning the topic covering many aspects like ecology, famines, economic implications of British rule, economy of Saurashtra, welfare outlook and reforms of ruling princes, land and land revenue, social reforms and development of agriculture, railways, education in Saurashtra were presented.

The deliberations at Seminar were mostly in Gujarati and it aroused great interest among all those who attended and participated.

Remedial English programme for weaker students at Bharathidasan Varsity

With a view to help the weaker students in English in the First Year Degree Courses, the Bharathidasan University is launching a 'Remedial English Programme' which will be conducted by the college teachers of this University area. The programme will be conducted in the beginning of the academic year by two teachers in each college for ten days. The programme provides for thirty teaching units (ten each in Listening Comprehension, Grammar and Composition and Reading Comprehension) and it is proposed to have this as a 'trial version'.

To orient the college teachers, who will conduct the Remedial English Programme in their respective colleges, on the method of teaching, a one-day Orientation Course is being conducted by the Department of English, Bharathidasan University, on 2nd January 1983 at National College, Tiruchirapalli. This will involve about 56 college teachers who in turn will give the necessary assistance to the other faculty members when involved at a later stage.

INSAT 1-B

28 AIR stations linked to INSAT network

Twenty-eight stations of All India Radio have been brought under the INSAT based radio networking scheme. Special equipment has been installed at these stations to receive programmes directly from the satellite.

These stations are : Agartala, Ahmedabad, Aizawl, Bangalore, Bhopal, Calicut, Coimbatore, Cuttack, Gangtok, Gauhati, Gorakhpur, Hyderabad, Imphal, Jaipur, Jullundur, Jeypore, Kohima, Leh, Lucknow, Panaji, Pondicherry, Raipur, Ratnagiri, Rohtak, Siliguri, Srinagar, Trivandrum and Visakhapatnam.

The newly acquired satellite medium will be used for the dissemination of centrally originated news bulletins, national programmes and other programmes of all-India importance. So far, these stations have had to depend on the battery of shortwave transmitters from Delhi/Aligarh or on the P and T circuits for the relay of these programmes. These systems have their deficiencies.

The Satellite medium on the other hand, is free from all the drawbacks and will ensure a significant improvement in the quality of reception. Broadcasting House in New Delhi is feeding programmes to INSAT-1B through the Delhi earth station of the P & T Department.

At present, it is possible to feed simultaneously two programmes to the Satellite from Delhi. This will be enhanced to five in the course of the next one year. At the same time, the up-link facility will be extended to the other three metropolitan centres, namely, Bombay, Calcutta and Madras, where a single-channel programme feeding facility on time-shared basis has been planned.

By the time the programme feeding facilities to the satellite are fully established at all the four centres, the special receiving equipment will be installed at all the 86 stations of AIR.

(Courtesy : THE HINDU)

AIU News

Mahmood Hussain of Aligarh to lead Varsities Hockey Team

A 16-member Hockey Team was announced by the Selection Committee to represent Combined Universities in the Junior National Hockey Championship being held at Bhopal from January 6-15, 1984.

The Selection trials were conducted at Aligarh on 30th & 31st December, 1983. Mahmood Hussain of Aligarh University has been nominated as the Captain of the team. The other members are:

(1) Sajid Ali Khan, Aligarh Muslim University; (2) Tasawar Mohammad, Aligarh Muslim University; (3) Harjeet Singh, Punjabi University; (4) Shakil Ahmad, Gorakhpur University; (5) Ancesur Rahman, Aligarh Muslim University; (6) S. Asim Zafar, Aligarh Muslim University; (7) Arif Ali, Aligarh Muslim University; (8) Jasjit Singh, Punjab Agrl. University; (9) Mohd. Naim, Aligarh Muslim University; (10) Navjot Singh, Punjab Agrl. University; (11) Zafarul Hasnain, Aligarh Muslim University; (12) Jaswant Singh, Guru Nanak Dev University; (13) Ajit Singh, Punjabi University; (14) Gurjeet Singh Panjab University; and (15) Sunil Kullu, Ranchi University.

Prior to the participation, the team will undergo a coaching camp at Aligarh Muslim University to be supervised by Hockey Coach, Shri Javed Ali.

C.U. Women's team make it to semi-final in National Hockey

The Combined Universities Women Hockey Team participated in the recently concluded National Hockey Championship at Simla. The performance of the team has been quite satisfactory. The team won against Kerala State (1.0) and played a draw (1.1) against Uttar Pradesh in the pool matches and qualified for a quarter-final berth. Combined Universities' Team reached the semi-final after defeating Delhi (1.0). In the semi-final, they lost to Railways (0.3) after a well fought match. The Railways eventually became the National Champion.

Poona (Men & Wome Runners up West Zo Badminto

In the recently concluded Inte University Badminton (We Zone) Tournament at Udaipu Poona University (Men and Women) Teams took second positio In the Men Section, Bomba University defeated Poona. I the Women Section, Poona los to Indore University. All thes 4 teams have qualified from Wes Zone to participate in the Inter Zonals of Badmintion Tournament being held at Kakatiya University, Warangal.

News from Abroad

Pakistan increases fees for foreign students

Pakistan has decided to increase the fees payable by students coming from abroad to Rs. 28,000 for undergraduate courses and to Rs. 30,000 for postgraduate courses. Foreign students were hitherto paying Rs. 150 and Rs. 200 respectively. Fees in medical and engineering colleges for foreign students have also been raised to Rs. 38,000. These new rates are operative from this year.

Most of the foreign students come from the nearby Islamic States. It is estimated that out of nearly 5,000 foreign students in Pakistan, a large number are Palestinians, Iranians and Jordanians besides other Arabs and Africans.

According to the Government of Pakistan, the rate for foreign students was being increased because there was aleady a mounting burden of educational subsidies on the national exchequer due to price rises.

[Source: THES dt. 30.9.83]

International Institute of Islamic Economics

An International Institute of Islamic Economics is to be set up as a Department of Pakistan's Islamic University in Islamabad. Gen. Ziaul Haq, the President of Pakistan and Chancellor of the University recently promulgated a decree for setting up the Institute.

The School of Economics of Pakistan's Institute of Social Sciences will merge with the new International Institute of Islamic Economics. The Institute will seek to collaborate with Saudi Arabia's International Centre of Research in Islamic Economics at the King Abdul Aziz University in Jeddah and with similar institutes in other Islamic States.

[Source: THES dt. 14.10.83]

New Chairman for Australian VCs Committee

Professor Michael Birt, CBE, Vice-Chancellor of the University of New South Wales, has been elected Chairman of the Australian Vice-Chancellors' Committee. Professor Birt begins his two-year term of office from 1 January 1984. Professor Birt succeed Professor David Caro, OBE, Vice-Chancellor of the University of Melbourne.

Professor D. R. Stranks, Vice-Chancellor of the University of Adelaide, will be Deputy Chairman of the AVCC.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

HUMANITIES

Philosophy

1. Chattopadhyay, Rama. Personal memory : An analysis of its meaning and logic. University of Calcutta.

2. Pandey, Mohni. Upnishadon mein man evam pran ka swarup tatha sambandh. Rohilkhand University.

3. Prajapati, Shiva Pandit. Shaiva-siddhant aur Kashmir Shaivadarshan mein moksha ka swarup. Banaras Hindu University.

4. Rama Kant. Kautilya ke samaj darshan ka alochnatmak adhyayan. Rohilkhand University.

5. Roy, Nilay. Some philosophical problems concerning man and society in ancient Indian philosophy, R.G. Veda and Manu. University of Calcutta.

6. Saraswati, Swami Gurupadanand. Vaidik darshane swatmaswarupvimarshah. Banaras Hindu University.

7. Sharma, Suresh Prasad. Madhyavedant vad ka tulnatmak aur sameekshatmak adhyayan: Shri Arvind, Shri Ram Krishan Paramhans tatha Swami Vivekanand ke darshan ke vishesh sandarbh mein. University of Bihar.

8. Shastri, Prithivinath. The dialectics or negation in sartre. University of Poona.

9. Trivedi, Madan Mohan. An advaitic appraisal of the philosophy of F.H. Bradley. University of Gorakhpur.

Religion

1. Phongsai Upasika Arree. A critical and analytical study of the therigatha and its althakatha with special reference to their historical aspects. Magadh University.

Fine Arts

1. Savitri Devi, D. Inscribed Gupta sculptures from North India. Panjab University.

Painting

1. Vagh, Prabhakar. Bhartiya chitrakala mein Radha. Vikram University.

Music

1. Banerjee, Amit Kumar. Hindustani sangeet: Parivartansheelta, Uttar Mughal kal se adhunik yug prayant. Awadhesh Pratap Singh University.

2. Gohadkar, Prabhakar. Gwalior kee sangeet prampara evam sanskriti. Awadhesh Pratap Singh University.

Language & Literature

English

1. Adarsh Bala. Aldous Huxley and his religion: A study of his philosophical and mystical evaluation. Rohilkhand University.

2. Barche, Gangadhar. A comparative study of the stylistic features of Keats and Hughes. Devi Ahilya Vishwavidyalaya.

3. Chandani, R.J. A critical examination of the plays of Miss Lillian Hellman. Ravishankar University.

4. Das, Lakshmikanta. A comparative study of the absurd and mechanical life in the works of Albert Camus and George Oswell. University of Calcutta.

5. Krishnaraj, D. The identity of Langston Hughes: Beyond race and protest. University of Calicut.

6. Lahiri, Tapati. The theme of childhood in six English poets. Banaras Hindu University.

7. Mehar, Amarjit Singh. The artist as rebel: Protest in Mulk Raj Anand's novels. Panjab University.

8. Rajakrishnan, V. Art and commitments in the plays of Arthur Miller. University of Calicut.

9. Ranganath, Nandyal. The oriental element in Henry Miller. Andhra University.

10. Sanyal, Samaresh Chandra. R.K. Narayan as an Indo-Anglian novelist. University of Calcutta.

11. Sehgal, Shwetambari R. The occult in Shakespeare with special reference to astrology. Banaras Hindu University.

12. Temsula Ao. The heroines of Henry James. North-Eastern Hill University.

13. Vohra, S.K. Negative utopian fiction: Commitment and fabulation with special reference to Alduous Huxley and George Orwell. Central Institute of English and Foreign Languages, Hyderabad.

14. Warmphaign Sten H. Khasi poetry: Its origin and development. North Eastern Hill University.

Sanskrit

1. Acharya, Nandini. Yogvasishth evam Bodh darshan ka tulnatmak adhyayan. Ravishankar University.

2. Anand Bala. The treatment of the Vedic dieties in the Mahabharata. Panjab University.

3. Bhatnagar, Smita. Mimansa nyaya-prakash tatha iske strot, Banaras Hindu University.

4. Chakraborti, Aparna Debi. A critical study of Govardhana's Aryasaptasati. University of Burdwan.

5. Digwa, Sarita, Kurukshetra in the Mahabharata. Panjab University.

6. Diwakar Singh. Valmikiya Ramayana mein kavyashastriya tatva. Banaras Hindu University.

7. Guru, Rita, Jain sahitya kee ayurvediya samagri ka adhyayan. Banaras Hindu University.

8. Jain, Baboo Lal. Jiwandhar Champu ka kavya shastriya evam sanskritik parisheelan. Magadh University.

9. Meena Rani. A critical study of Jimutavahana's Dayabhaga in the context of Dayabhagaprabodhini of Sri Krsnatarkalamkara. Panjab University.

10. Meera Devi Updeshsahstri ke vishesh sandarbh mein Shankracharya ke advaitvad ka alochnatmak adhyayan Rohilkhand University.

11. Mishra, Gayatri. A critical study of Usaniruddha natakam by Cayani Chandrasekhara Rayaguru. Utkal University.

12. Natu, Padmini. Atharva vediya bhaishajya vigyna. Banaras Hindu University.

13. Pandey, Vishnu Prasad. Contribution of Kashmir to Sanskrit literature . Panjab University.

14. Rajendran, C. A study of Mahimabhatta's vyaktiviveka. University of Calicut.

15. Sharma, Nand Kishor. Sanskrit bhakti sahitya mein Shriradha ka swarup. Panjab University.

16. Sharma, Om Sharan. Anandvrindavan Champu: Sahityik evam darshnik anusheelan. Rohilkhand University.

17. Shastri, Yougendra Mohan. Kalika Puran mein shakti tatva evam shakti sadhna. Rohilkhand University.

18. Tripathi, Ravindra Nath. Mahayan granthon mein nihit ayurvediya samagri ka adhyayan. Banaras Hindu University.

Punjabi

1. Avtar Singh. Samkaleen itihasik pripekh vich Giani Hira Singh Dard dee sahitik rachna da alochnatmak adhyayan. Panjab University.

2. Jauhal, Bakhshish Singh. Folk elements in Panjabi drama. Panjab University.

3. Sidhu, Gurtarn Singh. Comparative study of Prof. Puran Singh and Walt Whitman. Panjab University.

4. Tripat Kaur. Adi Granth vich istri da sankalp. Panjab University.

Hindi

1. Agarwal, Sandhya. Swatantryottar Hindi kavya mein kranti chetna. Rohilkhand University.

2. Akhtar Ali. Jainendra ke upanyason ka samajik manovaigyanik adhyayan. Rohilkhand University.

3. Arya, Om Dutt. Bijnor kshetra kee gramodhyog sambandhi shabdavali ka adhyayan. Rohilkhand University.

4. Chandrika, T. A comparative and contrastive study of Hindi and Malayalam grammar. University of Calicut.

5. Dahmiwal, Ranvir Singh. Mohan Rakesh ke vyaktitva ke adhar par unka sahitya mein chitrit dvandh evam antervandh ka adhyayan. Maharshi Dayanand University.

6. Dayavati. Adhunik Hindi upanyason mein nari manodasha kee abhivyakti, san 1950-1970 E. Banaras Hindu University.

7. Dwivedi, Haushila Prasad. Hindi ke Ram kavya mein Hanumat charitra ka swarup. Banaras Hindu University.

8. Gupta, Suraj Kanti. Pandit Raichander krit Sita Charit aur Tulsidas krit Ram Charit Manas ka tulnatmak adhyayan. Rohilkhand University.

9. Jha, Arti. Hindi ke itihasik ekankiyon mein nari ka swarup aur charitra ka anusheelan. Awadhesh Pratap Singh University.

10. Mahesh Chander. Beesvi shatabadi poorvadh evam uttarardh kee Hindi Kahanion ka samaj manovaigyanik drishti se tulnatmak adhyayan. *D. Litt.* Rohilkhand University.

11. Mishra, Virendra Kumar. Dr. Baldevprasad Mishra: Vyaktitva evam krititva. Ravishankar University.

12. Pandey, Pyare Lal. Sameeksha ka pratiman aur Acharya Hazari Prasad Dwivedi. Banaras Hindu University.

13. Parashare, Sulekha R.G. Linguistically oriented stylistic study of Jai Shankar Prasad's plays. Bangalore University.

14. Parasyraman, P.S. Saurashtra bhasha tatha Hindi. Magadh University.

15. Patel, Brijlali. Mira kavya mein prayukt vishisht shabdavali ka anusheelan. Awadhesh Pratap Singh University.

16. Patil, Hanamant Dnyandeo. Dr. Pratapnarayan Tandon: His life and works. Shivaji University.

17. Raju, Chanchala. Adhunik Hindi natakon mein itihasik aur pauranik kathanak: Rup, vikas, prayog aur parinati, san 1950 se 1980 tak. Vikram University.

18. Rameshwaram. Chayya vadottar Hindi kavita mein yug chetna. Vikram University.

19. Rastogi, Arun Lata. Fanishwar Nath Renu ka jeevan, vyaktitva evam sahitya. Rohilkhand University.

20. Saraswat, Sanjay. Pant ke kavya, 1922-1940 mein lalitya yojna. Rohilkhand University.

21. Singh, Pramila. Prasad ka katha sahitya. Banaras Hindu University.

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24. Singh, Suman. Tulsi kee samajik chetna: Adhunik sandarbh mein. Banaras Hindu University.

25. Singh, Vijayshree. Rasleela parampara mein Sur kee raspanchadyayi ka sthan. Banaras Hindu University.

26. Singh, Vimla. Hindi ke janavadi upanyas, 1960-1980 paryanta. Banaras Hindu University.

27. Somwanshi, Shankarrao G. Astitavadi drishtikon se Hindi aur Marathi ke upanyas ka tulnatmak adhyayan. University of Poona.

28. Thakur, Daya Vati. Tulsi ke kavya mein unke jiwan tatha vyaktitva kee abhivyakti: Kavitavli, Vineya-patrika aur Ramcharit Manas ka vishisht sandharbh. Panjab. University.

29. Velayudhan, K.K. The contribution of representative poets in the development of modern Hindi criticism on poetry. University of Cochin.

30. Yadav, Ramesh Chandra. Jai Shankar Prasad aur Laxmi Narayan Mishra ke itihasik natkon ka itihasik pramanikta kee drishti se adhyayan. Rohilkhand University.

31. Zakir Husain. Hindi evam Urdu pragtivadee kavya ka tulnatmak adhyayan. Rohilkhand University.

Urdu

1. Mohammad Istfaque Ahmed. The concept of being (Khudi) in Iqubal's poetry. Magadh University.

2. Naqvi, Syed Mohammad Seyadat. Ali Nazar, hayat aur shairi. Rohilkhand University.

3. Shehnaz Anjum. The development of literary Urdu prose in North India 1800 to 1857. Jamia Millia Islamia.

Bengali

1. Bhattacharya, Namita. Yugasandhir Bangla sahitya, 1761-1833. Banaras Hindu University.

2. Bhattacharyya, Arupkumar. Satinath Bhaduri: Jiban O-Sahitya. University of Calcutta.

3. Bhattacharyya, Jnanendranath. Prachin-O-Madhya yuger bangla sahitya tantrer prabhav. University of Calcutta.

4. De, Anilbaran. Bangla Goddya-O-Keshabchandra Sen. University of Calcutta.

5. De, Krishnananda. Bangla anubad sahitya-O-Rabindranath. University of Calcutta.

6. Goswami, Sanatan. Bangla ekanka natak Rup-O-Rupakar. University of Calcutta.

7. Mandal, Namita. Mallbhumer sahityik sanskrity. University of Calcutta.

8. Mohammad Shahjahan. Bangla chhander byakaran. University of Calcutta.

9. Sahu, Satyabati. Prachin-O-Madhya yuger Bangla sahitye Krishna kathar kramabikas. University of Calcutta.

Oriya

1. Behera, Rama Kanta. Oriya sahityaku Doctor Mohatabankar Abadana. Utkal University.

2. Panda, Nimai Charan. Paschima Orissara lokasahityara swarup. Sambalpur University.

3. Sahoo, Mohanlal. A study of folk songs and folk dances of Mayurbhanj. Utkal University.

Marathi

1. Bhide, Vasudha V. A descriptive study of Chitpavni of dialect of Marathi. University of Poona.

2. Suresh, N. Error analysis of Hindi as spoken and written by Malayalam speaking students. University of Poona.

Persian

1. Shaukat Nihal. Mirza Mohammad Khan Qaswini: As critic and scholar. Jamia Millia Islamia.

Tamil

1. Sargunam. C. Dasavataras of Thirumal in Sangam and medieval Tamil literature: A critical study. Sri Venkateswara University.

Malayalam

1. Venugopala Panicker, T.B. A critical study of the pithika of Kerala paniniyam. University of Calicut.

Telugu

1. Gururama Prasad, T. A critical study of the Ballad poetry in Kurnool District. Sri Venkateswara University.

2. Indira Rani, A. Andhramahabarathamu : Dharma swarupamu. Sri Venkateswara University.

3. Narasimha Reddy, P.C. Sociolinguistic aspects of Telugu-Tamil bilingualism with special reference to bilingual Telugu spoken in Nagari. Sri Venkateswara University.

Geography

1. Chaubey, Sarla. Population patterns and problems in Madhya Pradesh. Ravishankar University.

2. Goel, Niranjan Prasad. Demographic structure of North East India. North-Eastern Hill University.

3. Het Ram. Resource appraisal and industrial development in Kumaun-Himalaya. Rohilkhand University.

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5. Singh, Mata Prasad. Service centres planning of Jaunpur District. Banaras Hindu University.

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7. Singh, Shree Pal. Devriya janpad mein grameen adhivas evam seva kendra : Grameen vikas mein ek adhyayan. University of Gorakhpur.

8. Susheel Kaur. Changes in the occupational structure of India's male population : 1961-71. Panjab University.

History

1. Asthana, Dileep Kumar. Hafij Rahmat Khan: Ek jivanavdhi, san 1706, isvi-1774 isvi. Rohilkhand University.

2. Brahmanand. Some aspects of the agrarian structure in Western India: The districts of the Central Division, 1880-1930. Jawaharlal Nehru University.

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18. Singh, Krishna Kumar. The President of the Central Legislative Assembly of India 1921-47. Magadh University.

19. Talukdar, Jitendra Kumar. A socio-cultural study on the Matak people of Upper Assam with special treatment of the Maran. Gauhati University.

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Dean/Professor : Rs. 1500-60-1800-100-2000-125-2-2500.

Associate Professor : Rs. 1200-50-1300-60-1900.

Assistant Professor : Rs. 700-40-1100-50-1600.

Benefits of D.A., H.R.A., P.F. and leave etc. would be according to University rules.

Qualifications

Generally as prescribed by the University Grants Commission/University. Details of qualifications will be supplied alongwith application form. Some Changes are likely to take place in the light of latest qualifications laid down by the U.G.C.

NOTE

1. Number of posts may be increased or decreased.
2. For all the posts of Engineering such candidates who fulfil ICAR/ICTE qualifications may also apply. (This relaxation may be done in case of poor response, the candidates having 1st class B.E. Degree may also be considered in the Faculty of Agril. Engineering.
3. In case of Professor Plant Physiology, Agronomy, Assoc. Professor Extension, Ag. Economics, Parasitology, Mining Engg., Home Management, Assistant Professor of Anatomy, the candidates who have already applied in response to our previous advertisement No. 2/83 dated 14.2.83, and No. 4/83 dated 23.5.83 need not apply again.
4. The qualifications may be relaxed in case the response is poor.
5. The applications received after the expiry of the last date may also be considered at the discretion of the Vice-Chancellor.
6. 16% posts would be reserved for Scheduled Caste & 12% for Scheduled Tribe, Subject to general suitability.
7. Application form can also be obtained from the following Officers :
    1. The Director (Research) Agril. Experiment Station, (Agricultural Research Station) Durgapura (Jaipur).
    2. The Dean, S.K.N. College of Agriculture, Jobner.
    3. The Dean, College of Vety. & Animal Science, Bikaner.
8. The University reserves the right not to fill up any of the posts advertised, if deemed necessary.

G.S. Sharma
REGISTRAR

CLASSIFIED ADVERTISEMENTS

UNIVERSITY OF ROORKEE

ROORKEE (U.P.)

ADVERTISEMENT NO. EST(A)/11/83-A-86 (Advt.) **Dated : 5-12-1983**

Applications on prescribed form, obtainable from the Registrar either personally or by sending a self addressed envelope (9″× 4″) affixed with Rs 1.10 stamps, are invited for the following posts. The prescribed qualifications may be relaxed for candidates with exceptional research/industrial/administrative experience. Higher starting salary could be offered to candidates depending on their qualifications and experience. Contributory Provident Fund and Dearness allowance will be admissible as per University rules. The age of superannuation is 60 years. Applicants should generally not be above 55 years. Candidates in employment are required to send their applications through proper channel. Applications received late/incomplete or without required remittance will not be entertained.

Last date for receipt of complete application on prescribed form alongwith application fee of Rs. 10/- (By a Bank draft or Indian Postal Orders in favour of the Registrar, University of Roorkee) is **Jan. 25, 1984 (Feb. 25, 1984)** for overseas candidates.

Sl. No.	DEPARTMENT	PROFESSOR (1500-2500)	READER (1200-1900)	LECTURER (700-1600)
A.	**ARCHITECTURE & ENGINEERING DEPARTMENTS**			
1.	ARCHITECTURE & PLANNING	1 R	—	2 TLR
2.	CIVIL ENGG.	—	6R+2T	6R+1T
3.	METALLURGICAL ENGG.	—	—	2 R
4.	MECH. & INDL. ENGG.	—	—	3R
5.	ELECTRICAL ENGG.	3 R	5R+1T (upto Aug. 1986)	1R+1TLR+3T (1T upto Aug. 84 but likely to continue longer)
6.	CONTINUING EDUCATION	—	1R	—
7.	UNIVERSITY SERVICE & INSTRUMENTATION CENTRE	—	1TLR	—
8.	ROORKEE UNIVERSITY REGIONAL COMPUTER CENTRE	—	—	1T
9.	EARTHQUAKE ENGG.	2R	1R+1T	3R+4T
B.	**SCIENCE DEPARTMENTS**			
1.	CHEMISTRY	1T	—	1R
2.	EARTH SCIENCES	1 TLR	1 T	1R+2TLR+1T
3.	PHYSICS	—	3R	2R
4.	BIO SCIENCES	—	1R	—
5.	HUMANITIES & SOCIAL SCIENCES	—	—	1R (French) 1R (Economics)

C. TEACHING POSTS AT INSTITUTE OF PAPER TECHNOLOGY (SAHARANPUR)

1. HEAD, ELECTRICAL & INSTRUMENTATION DEPARTMENT : 1 T
(Rs. 1540-60-1900-EB-75-2200)
2. SENIOR INSTRUCTOR (ELECTRICAL) : 1 T
(Rs. 1250-50-1300-60-1660-EB-60-1900-EB-75-2050)

D. ADMINISTRATIVE POST

1. ASSISTANT REGISTRAR : 1 R
(Rs. 770-40-1050-EB-50-1300-60-1420-EB-60-1600)

E. OTHER POST

1. SCIENTIFIC OFFICER (PHYSICS) : 1R
(Rs. 700-1600)

QUALIFICATIONS FOR ENGINEERING DEPARTMENT

PROFESSOR : QUALIFICATIONS : Essential : (a) A Doctor's degree and published work of high standard. (b) Consistently good academic record with at least I class at Master's or Bachelor's level. (c) Experience in guidance of research, preferably at Ph.D. level. (d) 12 years' experience of teaching/research/design and Industry in appropriate field with at least 5 years' in teaching/research.

Desirable : Teaching experience in an Institution of University level. (b) Specialised industrial experience in the appropriate field.

READER : QUALIFICATIONS : Essential : (a) A Doctor's degree or A Master's degree with published work of high standard (b) Consistently good academic record with at least I class at Master's or Bachelor's level. (c) 7 years' experience of teaching/research/design and industry in appropriate field with at least 2 years' experience in teaching/research.

Desirable : (a) Experience in guidance of research. (b) Teaching experience in an Institution of University level. (c) Published research work.

NOTE : A candidate selected for Reader's post who does not hold a Ph.D. must acquire the same within 5 years of his appointment failing which he will cease to draw the annual increment until he acquires the Ph.D. degree.

LECTURER : QUALIFICATIONS : **Essential :** (a) A Master's degree (b) Consistently good academic record with I class at Bachelor's degree and/or Master's degree level. (c) One year's relevant professional experience outside academic/research Institutions.

NOTE

1. A candidate selected for teacher's post who does not hold a Ph.D. must acquire the same within 7 years of his appointment failing which he will cease to draw the annual increment until he acquires the Ph.D. degree.

2. Provided further that if a candidate does not possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of 5 years of his appointment failing which he will not be able to earn future increments, until he fulfils this requirement.

QUALIFICATIONS FOR SCIENCE DEPARTMENT

PROFESSOR : QUALIFICATIONS : **Essential :** (a) A Doctor's degree and published work of high standard. (b) Consistently good academic record with at least I class at Master's or Bachelor's level. (c) Experience in guidance of research preferably at Ph.D. level. (d) 12 year's experience of teaching/research.

Desirable : (a) Teaching experience in an Institution of University level.

LEADER : QUALIFICATIONS : **Essential :** (a) A Doctor's degree (b) Consistently good academic record with at least I class at Master's or Bachelor's level. (c) 7 years' experience of teaching/research/design and Industry in appropriate field with at least 2 years experience in teaching/research.

Desirable: (a) Published research work. (b) Experience in guidance of research. (c) Teaching experience in an Institution of University level.

LECTURER : QUALIFICATIONS : **Essential :** (a) A Doctor's degree (b) Consistently good academic record with at least I class at Master's or Bachelor's level.

Desirable : (a) Teaching experience in an Institution of University level.

NOTE : If a candidate for Lecturer's post possessing a Doctor's degree or equivalent published work is not available or is not considered suitable, a person possessing a consistently good academic record (due weightage being given to M. Phil. or equivalent degree or research work of quality) may be appointed on the condition that he will have to obtain a Ph.D. degree within 7 years of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

QUALIFICATIONS FOR TEACHING POSTS AT INSTITUTE OF PAPER TECHNOLOGY (SAHARANPUR)

1. HEAD, ELECTRICAL & INSTRUMENTATION DEPARTMENT

QUALIFICATIONS : **Essential :** (a) A Doctor's degree or A Master's degree with published work of high standard. (b) Consistently good academic record with at least I class Master's or Bachelor's level. (c) 7 years' experience of teaching/research/design and Industry in appropriate field with at least 2 years' experience in teaching/research.

Desirable : (a) Experience in guidance of research. (b) Teaching experience in an Institution of University level. (c) Published research work.

2. SENIOR INSTRUCTOR (ELECTRICAL)

QUALIFICATIONS : **Essential :** (a) A Master's degree (b) Consistently good academic record with I class at Bachelor's degree and/or Master's degree level. (c) One year's relevant professional experience outside academic/research institution.

QUALIFICATIONS FOR ARCHITECTURE DEPARTMENT : PROFESSOR

QUALIFICATIONS : **Essential :** (a) A Master's degree or an equivalent qualification (b) Consistently good academic record with atleast I class at Master's or Bachelor's level. (c) 12 years of teaching/research/professional experience in appropriate field, with at least 5 years in teaching/research. (d) Evidence of high quality published research work or professional design.

Desirable : (a) Doctor's degree (b) Experience in guidance of research. (c) Teaching experience in an Institution of University level.

LECTURER : QUALIFICATIONS : **Essential :** (a) Bachelor's degree in Architecture plus 2 years of relevant professional experience or Master's degree in Arch. and one year's relevant professional experience. (b) Consistently good academic record with at least I class at Master's or Bachelor's level.

NOTE : (a) Provided further that if a candidate does not possess a Master's degree in Architecture and Professional Engg. or a person possessing such experience is not found suitable, the person appointed will be required to obtain the Master's degree within a period of 5 years of his appointment failing which he will not be able to earn future increment until he fulfils this requirement.

QUALIFICATIONS FOR ADMINISTRATIVE & OTHER POSTS

ASSISTANT REGISTRAR : QUALIFICATIONS : **Essential :** (a) A good Bachelor's degree in any field of Arts, Science, Commerce or Engineering (b) Not less than 5 years' administrative experience/academic experience (c) A good knowledge of Hindi and English.

Desirable : (a) A Master's degree or a degree in law or in Business Administration (b) Experience in University Administration work.

SCIENTIFIC OFFICER (PHYSICS) : QUALIFICATIONS : **Essential :** (a) A Master's degree in Electronics/Electrical Engineering with a consistently good academic record. (b) 2 years' professional experience.

Desirable : Doctor's degree.

SPECIALISATION : Experience in dealing with Multichannel Analysis, plus circuitory and other sophisticated Electronics Equipment.

NOTE : 1. Other details required for various posts alongwith specialisation etc. will be supplied alongwith application form.
2. Number of posts shown above may change at the time of selection.

R=REGULAR T=TEMPORARY TLR=TEMPORARY LIKELY TO BE REGULAR

O.N. Chaturvedi
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY
KANPUR
ADVERTISEMENT NO. 19/83

Applications are invited for the following positions :

1. ADMINISTRATIVE OFFICER (Rs. 1500-2000)	: 3 Posts	(1 post reserved for Scheduled Caste community)
2. DEPUTY REGISTRAR (Rs. 1100-1600)	: 2 Posts	(1 post reserved for Scheduled Caste community)
3. ASSISTANT REGISTRAR (Rs. 700-1300)	: 3 Posts	(1 post reserved for Scheduled Tribe failing S.C. community)
4. ACCOUNTS OFFICER (Rs. 840-1200)	: 1 Post	(Reserved for Scheduled Tribe community)
5. ASSISTANT SECURITY OFFICER (Rs. 425-700)	: 3 Posts	(1 post reserved for Scheduled Caste community)
6. SENIOR MEDICAL OFFICER (Rs. 1100-1600)	: 1 Post	
7. SENIOR PURCHASE OFFICER (Rs. 1100-1600)	: 1 Post	(Reserved for Scheduled Tribe community)

Officers at Sl. Nos. 1, 6 and 7 are presently heads of the Sections. Positions 5 and 6 carry licence free unfurnished accommodation. Position at Sl. No. 6 carries additional benefits of NPA on slab basis.

The educational and other qualifications prescribed for the above positions are given below:

1. **Administrative Officer** : A High Second Class degree in Arts/Science/Commerce/Engineering/Business Administration/Personnel Management with 15 years administrative experience in responsible positions either in an academic institution/government organization/business establishments of repute with proven capabilities in Establishment/General Administration/Civic Administration/Personnel Management Public Relations.

2. **Deputy Registrar** : A high second class degree in Arts/Science/Commerce/Engineering/Business Administration/Personnel Management with 12 years experience in a supervisory position in an academic institution/Government organization/business establishment of repute in general administration/establishment/Civic administration/Personnel Management/Public relations.

3. **Assistant Registrar** : Graduate in Arts/Science/Commerce/Engineering/Business Administration/Personnel Management with 10 years experience in a supervisory position in an academic institution/Government organization/Business establishment of repute in general administration/establishment/civic administration/Personnel management/Public relations/Students Welfare/Training and Placement.

4. **Accounts Officer** : Passed Sub-ordinate Accounts Service/Indian Institute of Chartered Accountants/Indian Institute of Costs and Works Accounts examination or equivalent with 10 years supervisory experience in an academic institution/Government organization/Business establishment of repute in administration relating to finance and accounts matters.

5. **Assistant Security Officer** : A Senior J.C.O. or equivalent from Defence, Police or Industrial Security Force or a graduate with 6 years experience of security supervision in a reputed organization.

6. **Senior Medical Officer** : An M.D./M.R.C.P./M.S. or equivalent with at-least 5 years experience. Administrative experience is desirable.

7. **Senior Purchase Officer** : A high Second class degree in Arts/Science/Commerce/Engineering/Business Administration with 12 years experience in supervisory positions under Government/University/Business organizations of repute in the area of Stores/Purchase/Import.

The qualifications and experience requirement can be relaxed in the cases of exceptionally meritorious candidates.

Posts at Sl. Nos. 2 to 7 are permanent while post at Sl. No. 1 is likely to be made permanent.

The appointments for positions at Sl. Nos. 1, 5, 6 and 7 are likely to be made on contractual basis for a period ranging from 3 to 5 years at the first instance.

Positions carry benefits according to the Institute rule, which at present correspond to those admissible to the Central Government employees stationed at Kanpur. Employees can avail CPF Scheme or CPF-cum-Gratuity Scheme or GPF-cum-Pension-cum-Gratuity Scheme. Higher initial pay is admissible in case of exceptionally qualified candidates. Candidates called for interview will be paid second class to and fro railway fare.

Applications must be made on prescribed form obtainable free of charge from the Assistant Registrar (Administration) of the Institute by sending a self addressed unstamped envelope of 25 cm× 10cm size. Application should be accompanied by a crossed Indian Postal Order of Rs. 7.50 (Re. 1.87 for SC/ST candidates). Completed applications should reach the Assistant Registrar (Administration), Indian Institute of Technology, Kanpur-208016 (India) or on before **January 31, 1984.**

UNIVERSITY OF HYDERABAD
(Advt. No. R/Dev./NT/1/83)

Applications on the prescribed form are invited for the post of Registrar of the University in the scale of pay Rs. 1500-60-1800-100-2000. In addition to pay, the post carries allowances, D.A., H.R.A., C.C.A., etc., admissible as per University rules in force from time to time which at present are equivalent to those admissible to Central Government Officers stationed at Hyderabad. Retirement benefits also are admissible according to rules.

Job requirements

The Registrar will be the Head of the administrative offices of the University and *ex officio* Secretary of the Court, Executive Council, Academic Council and Boards of Schools. He will be the custodian of records, common seal, etc., of the University. He will be overall incharge of the establishment, stores, purchases, estates, security, examination work, etc. He will perform such other duties as are and may be specified in the University Act, Statutes and Ordinances and Rules and/or as may be entrusted by the Vice-Chancellor or the Executive Council.

Qualifications, Experience, etc.

A good Master's degree from a recognized University with not less than 10 years experience of working in a University or other educational/research institution, or a Government, semi-Government Autonomous organization or a Scientific Research Institution at the executive level of which at least 5 years should be in an administrative and supervisory capacity not below the rank of a Deputy Registrar or in a position of comparable responsibility. The incumbent should have good knowledge of modern University administration, proven ability and sound experience in the management of an academic/research institution, developmental work, and maintenance of good rapport with students, academic and secretarial staff.

Desirable

A Law degree or legal background with at least a working knowledge of law as applied to University administration and maintenance of data about the University on computer files

Age : Not below 45 years.

Applications (available on request) accompanied by, a self-addressed stamped (Rs. 1.25 P.) envelope with the requisite application fee of Rs. 7.50 in the form of crossed Indian Postal Order (non-refundable) and attested copies of other documents/certificates should reach the Private Secretary to the Vice-Chancellor, University of Hyderabad, Central University Campus P.O., Hyderabad-500 134 on or before **31 January, 1984**.

Candidates called for interview from outstation will be paid contribution equivalent to return single second class railway fare by shortest route towards journey expenses. Candidates already in service should submit their applications through proper channel. Applications received after the last date or without complete information or without the requisite postal order are likely to be ignored.

It will be open to the University to consider the names of suitable candidates who may not have applied. Relaxation of any of the qualifications, age, experience, etc., may be made in exceptional cases on the recommendation of the Selection Committtee.

Canvassing in any form for or on behalf of the candidates will disqualify such candidature.

REGISTRAR

OFFICE OF THE REGISTRAR: GAUHATI UNIVERSITY

GAUHATI-781014

Advertisement No. 9 of 1983

Applications are invited for the following posts :

1. Professor of Biochemistry : One post (Permanent)
2. Reader in Biochemistry : One post (Permanent).
   The candidate should be M.Sc. in Biochemistry with Doctorate in the subject.
3. Lecturer in Assamese : One post (Permanent)
   The candidate should be an M.A. in Sanskrit Literature/Kavya Group.

Preference will be given to a candidate having special training/degree/research qualifications/published work of merit in textual and/or literary criticism.

4. Lecturer in Chemistry : One post (Temporary-leave vacancy).
   Specialisation-Physical Chemistry.

Scales of Pay

Professor : Rs. 1500-60-1800-100-2000-125/2-2500/-.
Reader : Rs. 1200-50-1300-60-1900/-
Lecturer : Rs. 700-40-1100-50-1600/-

All posts carry usual allowances admissible under the University rules in force from time to time.

In case where specialisation has not been mentioned against a post candidates should state their areas of specialisation at the Master's and Doctor's degree levels.

Essential Qualifications

Professor : An eminent scholar with published work of high qualiiy actively engaged in research. Ten years' experience of teaching and/or research. Experience of guiding research at Doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Reader : Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that atleast three of these years were as Lecturer or in an equivalent position. This condition may be relaxed in the case of candidates with outstanding research work.

Lecturer : (a) A Doctor's degree or research work of an equally high standard, and (b) Good academic record with at least second class (C in the seven point-scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University. Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research Laboratory/Organisation on the condition that he will have to obtain a Doctor s degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

Applications in plain paper in six copies giving full bio-data including (1) Name in full (in block letters), (2) Father's name, (3) Date of birth by Christian era, (4) (a) Permanent residenee and address (in full), (b) Present address (in full), (5) Present occupation if any and name of employer, (6) Present salary drawn (if any), (7) Detailed academic career with mark-sheets and subjects studied (including Honours) and degree and post graduate courses from Matriculation/Higher Secondary/High School Leaving Certificate Examination onwards and copies/reprints of research contributions, (8) Name and address of two referees not related to candidate together with an application fee of Rs. 10.0 (Rupees Ten), (Rs. 7.50 in case of Scheduled Caste/Scheduled Tribe candidates) only by CROSSED INDIAN POSTAL ORDER drawn in favour of the Registrar, Gauhati University payable at the Gauhati-781014 post office should be sent in an inner sealed cover superscribed application for the post of (Name of post applied for) Advt. No. 9 of 1983 enclosed in an outer cover addressed to the Registrar, Gauhati University, Gauhati-781014 to reach him not later than **25th January, 1984.**

The number of this advertisement and name of the post applied for must be referred to in the application.

Persons in employment should apply through proper channel or with a no objection certificate from the present employer.

Candidates will be required to appear at an interview if and when called for at their own cost.

Canvassing directly or indirectly will be a disqualification.

M.C. Bhuyan
REGISTRAR

SUKHADIA UNIVERSITY UDAIPUR

Advt. No. 7/83 Dated : 23.12.1983

Applications are invited on prescribed application form for the following posts on regular basis in the University in teaching, research and extension, so as to reach the undersigned within 30 days from the issue of publication in the Daily Newspaper. Application form and full details can be obtained from the undersigned on payment of Rs. 5/- through crossed Indian Postal Order in favour of the Comptroller, Sukhadia University, Udaipur accompanied by a self-addressed envelope, stamped worth Rs. 1.50 paise only.

1. Administrative Posts

(i) Dean, College of Vety. & Animal Science	1
(ii) Dean, College of Dairy Science	1

2. Faculty of Humanities/Social Sciences/Science

(i) Professor Chemistry	1
(ii) Assoc. Professor Drawing & Painting	1
(iii) Assoc. Professor Geography	1
(iv) Asstt. Professor Library Science	1

3. Faculty of Agriculture

(i) Professor of Plant Physiology	2
(ii) Professor of Agronomy	2
(iii) Professor of Plant Breeding	1
(iv) Assoc. Professor Extension	6
(v) Assoc. Professor Ag. Economics	6
(vi) Asstt. Professor Ag. Chemistry & Soil. Sc.	1
(vii) Asstt. Professor Horticulture	7

4. Faculty of Vety. & Animal Science

(i) Assoc. Professor Parasitology	1
(ii) Asstt. Professor Physiology & Bio-Chem. (Vety.)	1
(iii) Asstt. Professor Medicine	1
(iv) Asstt. Professor Anatomy	3
(v) Asstt. Professor Microbiology	1
(vi) Asstt. Professor Animal Genetics	1

5. Faculty of Agril. Engineering

(i) Assoc. Professor Electrical Engg.	1
(ii) Assoc. Professor Mining Engg.	1
(iii) Asstt. Professor Farm Machinery & Power Engineering.	2
(iv) Asstt. Professor Soil Water Conservation Engineering	1

6. Faculty of Home Science

(i) Assoc. Professor Home Management	1

(Continued on page 18)

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University News

JANUARY 16, 1984

Re. 1.00

HIMACHAL PRADESH UNIVERSITY
EIGHTH ANNUAL CONVOCATION
20 DECEMBER 1983

Shri Hokishe Sema (centre), Governor of Himachal Pradesh and Chancellor of Himachal Pradesh University at the Eighth Annual Convocation of the University.

CLASSIFIED ADVERTISEMENTS

INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY

P.O. IIT POWAI, BOMBAY-400076

Advertisement No. A-168/83.

Applications are invited for the following permanent posts at this Institute, in the prescribed form obtainable free of charge from the Registrar, Indian Institute of Technology, P.O. IIT, Powai, Bombay-400 076 on request accompanied by self addressed envelope (25 cm x 10 cm). Applicants should give an account of their academic and professional record and list of research publications. Persons employed in Government/Semi-Government Organisations or Educational Institutions should apply through proper channel. Indian candidates abroad may apply on plain paper in duplicate. The posts carry allowances such as D.A., C.C.A., H.R.A. as per rules of the Institute which at present correspond to those admissible to the Central Government employees stationed at Bombay. Depending on qualifications and experience, higher salary may be offered. A candidate may be considered for a lower position of a lecturer if not recommended for the post of Assistant Professor. Completed applications should reach the Registrar, IIT, Powai, Bombay-400 076 on or **before 31st January, 1984.**

Some posts of Lecturer are reserved for the candidates belonging to SC/ST community.

Assistant Professor : Scale of Pay : Rs. 1200-50-1300-60-1900.

Lecturer : Scale of Pay : Rs. 700-40-1100-50-1600.

Total emoluments on the minimum of the scale excluding H.R.A.

On basic pay Rs. 1200/- : total emoluments Rs. 2345/-.

On basic pay Rs. 700/- : total emoluments Rs. 1589.35.

1. **Department of Chemistry**

Qualifications & Experience

Assistant Professor

Applicant should have consistently excellent academic record with Doctorate degree in the appropriate field from a recognised University/Institute. Minimum 5 years experience in teaching and research after obtaining Ph.D. degree. Specialised knowledge in one or more specified fields. Experience of carrying out independent research and guiding research desirable.

Lecturer

Applicant should have consistently excellent academic record with doctorate degree in the appropriate field from a recognised University or Institute with two years research experience.

Fields of Specialisation

Inorganic spectroscopy, structural inorganic chemistry, Organometallics, bio-organic chemistry, photochemistry, organic synthesis, polymer chemistry, theoretical chemistry, thermodynamics and electrochemistry.

2. **Environmental Science and Engineering Group**

Qualifications & Experience

Assistant Professor in :

(1) Environmental Engg.

(2) Environmental Sciences (Environmental Microbiology).

Consistently good academic record with a Doctorate degree in the relevant field. About 5 years experience in teaching and/or research and development.

Candidates not possessing Ph.D. may also be considered if they have to their credit equivalent published research work or design/development work of high standard either in an Institution or in an Industry.

3. **Bio-Medical Engineering**

Qualifications & Experience

Assistant Professor-cum-Physician

(1) M.D. in Medicine from a recognised University.

(2) Nearly 10 years of clinical experience, out of which at least 3 years should be in a teaching hospital, in a teaching capacity.

(3) Some teaching and research experience in areas related to Biomedical Engineering like Haemorheology, wearable Artificial Kidney machine etc.

OSMANIA UNIVERSITY

HYDERABAD-500 007 (A.P.)

ADVERTISEMENT NO. 1/84 **Dated : 2nd Jan. '84**

Applications in the prescribed form together with the Registration Fee of Rs. 5/- payable through M.O./I.P.O,/Challan 'A' are invited for the following posts in the University Service, so as to reach the undersigned on or before **31st January, 1984.**

S. No.	Name of the Posts	No. of Posts
1.	Professor in Computer Science & Engg.	One
2.	Reader in Computer Science & Engg.	Two
3.	Lecturer in Civil Engineering (OU & KSM)	Two+One
4.	Lecturer in Mechanical Engineering (KSM)	One
5.	Lecturer in Mining Engineering (KSM)	One
6.	Lecturer in Library Science	One

Scale of Pay

Professor : Rs. 1500-2500
Reader : Rs. 1200-1900
Lecturer : Rs. 700-1600

Age

Professor : Not above 50 years.
Reader : Not above 40 years.
Lecturers : Not above 35 years.

Note

Age limit does not apply to the employees of this University. Relaxation in age to the extent of five years shall be granted to the candidates belonging to SC, ST/BCs.

14%, 4% and 25% reservations are made for SCs, STs and BCs respectively for the posts of Lecturers and Readers only.

Application forms can be had from the Director, Deptt. of Publications and University Press, Osmania University, Hyderabad 500 007, A.P. India, on payment of Rs. 4.50 in person or by M.O./I.P.O. uncrossed together with postal charges for ordinary/registered post made payable to the Director and by sending self addressed envelope of 14¼x26¼ cms.

Full particulars can be had on requisition from the Director, Osmania University Press at free of cost by sending a self addressed stamped envelope.

P.S. Ramachandran
REGISTRAR

UNIVERSITY NEWS

VOL. XXII JANUARY 16
No. 3 1984
Price Re. 1.00

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Editor :

M.S. RAMAMURTHY

UGC's Central Universities Panel Report

A six-member committee headed by the Chairman of the University Grants Commission, Dr. (Mrs) Madhuri R. Shah, constituted for examining the working of the Central Universities, has, after about two years of deliberations, come out with its report. Inter alia the committee examined whether the Central Universities are fulfilling the objectives set for them, the general state of discipline in them and the causes for the periodic disturbances in their compuses, adequacy of the machinery for the redressal of grievances of students, teachers, administrative staff, etc. and the desirability of evolving a code of conduct for political parties and to set limits of their involvement in university affairs. These terms of reference of the committee covered a wide spectrum of areas of activities in the Central Universities. The report naturally is wide ranging in its coverage.

University News is happy to give a summary of the main observations and recommendations made by the committee.

1. Whether the Central Universities are fulfilling the objectives set for them in their Acts and Statutes

1.1 Central Universities have to some extent pursued their academic objectives within resources available; they could have done better if they were allowed to function in a peaceful atmosphere free from agitations and strikes by different sections of the University community—students, karamcharis and in some cases even teachers. These strikes have created a perpetual crisis to the solution of which some of the recommendations are directed. The universities are a tremendous national resource for the country's future and we cannot afford to allow the present situation to continue. The leadership of the country, the intellectuals and the university community in particular, have to strain every nerve in order to bring the university system back to its creative role in our society.

1.2 Not all the Acts of the Central Universities prescribe the objectives for which they were established. Wherever these are indicated these have not been adequately fulfilled. In the Committee's view two objectives should at least have been kept in view: an all-India character of the Central Universities and pursuit of excellence by them. None of the Central Universities have been able to maintain an all India character, in the matter of admissions. It has been observed that in the case of some universities, student enrolment is only from the neighbouring areas, some time from a few districts. They give weightage to their own students for admission to subsequent courses which leads to inbreeding. The Committee found strong evidence of such inbreeding continuing in recruitment at all levels, which vitiates pursuit of excellence. Some of the universities have succumbed to pressures for admitting students far in excess of their academic or residential facilities and have thus compounded their problems reducing effectiveness in providing the highest quality of education.

1.3 The Committee has, therefore, recommended that a set of objectives should be clearly provided to the Central Universities to serve as a constant guide to the development of their educational and research programmes, and to provide a basis for judging their performance in future. The objectives could be on the following lines :

> The Central Universities as institutions of national importance will endeavour to serve the purposes of human resource development and national advancement by providing a wide variety of educational programmes to suit the needs and aptitudes of the scholars with due regard to the manpower needs of the country.
>
> The universities will endeavour to raise the quality of scholarship by all possible means and in particular by selection of students and

scholars on merit on a national basis, by designing such educational programmes which would cultivate knowledge, reflection, creativity, scientific temper and good judgement, by adopting modern methodologies of instruction and evaluation. They will strive to cultivate humane values as also the spirit of national integration and social justice.

The universities will endeavour to develop deeper understanding of natural and social environment among students and motivate them to serve the community by making projects studies and activities related to local and regional development as integral part of the relevant courses.

The universities will pursue excellence in the sphere of research and encourage research on problemes connected with social, economic and cultural development. For implementing relevant courses and research programmes the universities will endeavour to establish suitable linkages with other institutions and agencies in the region.

1.4 To overcome problems arising from unplanned growth of admission, the Committee has suggested the strategy (a) to limit admission to a capacity which cannot be changed under day-to-day pressures, (b) to limit the duration for which a student may be allowed to study a course, live in the hostels and be on the rolls of the University, (c) to make admissions according to merit for which the Central Universities may conduct a suitable examination, and (d) for the UGC/Government to provide opportunity for high quality education and attractive courses of study through distance education. In this connection the setting up of National University of Distance Education has been recommended.

It has also been recommended that in the case of universities which are directly enrolling students for undergraduate courses, there should be no expansion of student enrolment, but there should be a restructuring of these courses, to improve employment opportunities and undertake experimentation and innovation. The admission capacity in the universities may be prescribed by the Statutes, so as to avoid change in the same under pressures. The Committee has also urged that the Visitor on the advice of UGC and in consultation with the University concerned may be authorised to introduce a new Statute.

1.5 The Committee has observed that the most crucial stage of recruitment for avoiding inbreeding and promoting excellence in the universities is that of lecturers. It is essential that the best talent, having aptitude for and orientation towards teaching is recruited to this post.

The constitution of the Selection Committee for making recruitment for the posts of Lecturers, Readers and Professors has been proposed as follows: Vice-Chancellor, Pro-Vice-Chancellor, a nominee of the Visitor, a nominee of the Chairman, UGC, and three experts not connected with the University to be nominated by the Vice-Chancellor in the manner prescribed.

2. General State of Discipline and Remedial Action

2.1. The Committee has observed that hardly a week passes in the country when the news-papers do not carry some news or the other about disturbances in the Universities including Central Universities. It has carefully examined some of the incidents of student agitation and has come to the following conclusions:

(a) Agitations in the universities are launched by the Student Unions. The Unions, instead of taking up academic or genuine causes, or of contributing to the corporate life of the universities, take up populist causes and try to mobilise support. In an objective sense, their aim gets reduced to disruption of the normal functioning of the universities. Most of those who get into the leadership of the Unions are not persons of academic merit, but those who have either a long stay on the campus or have an eye on a political career for themselves, and want personal publicity. Not only this, but over the years rowdies and musclemen have come to play a very important role in agitations. Some of them could be on the roles of the university itself, and others are plain outsiders including in some cases people with a criminal record. The mischievous groups are very small, but they are extremely aggressive and quite willing to destroy the normal tenor of decent behaviour and inter personal relationship among students, teachers and authorities in the University, and resort to intimidation and different types of violence against the administration, the Faculty members and other students. In fact, all their actions are designed to attract counter measures on the part of administration which would add fuel to the fire ultimately leading to the law and order authorities to be asked to assist the universities.

(b) We are convinced that the vast majority of students are interested in careers of a different kind and they would like to pursue their studies in all seriousness. They have respect for their teachers and they are law abiding. But the tragedy is that they are either passive or silent spectators of such incidents. They are terrified of the kind of leadership described above and either unwillingly fall in line with it or remain totally unconcerned.

(c) Over the years, the number of student enrolment is increasing. As a result, all types of persons have been enrolling themselves as students and they merely seek the benefits of being a student and the finanical gain from living in hostels. Overcrowding soon leads to malpractices for gaining admission into hostels, and seeking the help of the rowdy elements towards this end. A kind of leadership is thus built up for the more vocal and the aggressive.

(d) One of the factors which causes the situation to get worse is soft decisions on the part of administration when faced with trouble of this kind.

(e) The administrative inefficiency and tardiness which prevails in most of the universities is to a certain extent responsible for such unhealthy trends on the campus. Unattended grievances tend to accumulate and build up an atmosphere in which the kind of leadership described above can exploit the situation.

[The next part of the Report will appear in the next issue].

Information Service
7 FEB 1984
C.F.T.R.I., MYSO

Twenty-Second Session

UNESCO GENERAL CONFERENCE

The Twenty-Second Session of the General Conference of UNESCO was held in Paris from October 25 to November 29, 1983. We give below excerpts from the Address by Mrs. Sheila Kaul, Minister of State for Education, Culture & Social Welfare and leader of the Indian delegation.

"...At a time when the contemporary world is passing through a grave crisis, this General Conference of UNESCO provides us an opportunity to reflect and to plan in a concerted way on themes which are fundamental to our quest for peace, cooperation, development and fulfilment. Inflationary and adverse pressures are shattering the economies of the developing world. Mounting tensions between the power-blocs and the dangerous policy of arms race accentuate the gravity of the crisis. The reluctance of the North to extend cooperation to the South poses a threat to peace and development. We need urgent and effective solutions. And as we read through the pages of the Draft Programme and Budget presented to us by the Director-General, we feel that UNESCO has again risen to its task and given us not only a realistic appraisal of the present world situation but also formulated for our consideration significant strategies and plans of action. Indeed, this document, faithful to the spirit and content of the Second Medium Term Plan, has succeeded to a great extent in achieving the much desired balance between the demands of reflection and those of action, and for this I would like to compliment, most warmly, the Director-General and his colleagues in the Secretariat . . .

"Mr. President, the persistence of racism in the modern world is a crying shame for mankind. How can the denial of freedom to the majority of the people of South Africa and people of Namibia be condoned, is a question that needs to be asked in all earnestness. Nelson Mandela, the flaming symbol of freedom, and many others are behind prison bars but their voices cannot be stiffled and resound the world over. I would like to submit for consideration of this Conference a possible programme under which UNESCO could provide support for publications to make international public opinion more aware of the history of the National Liberation Movements and the nature of the struggle against apartheid. This can best be done under Major Programme XII.

"Similarly it is important and urgent to explicate more clearly the fundamental contents of the ideals of peace and international understanding. Peace is not a negative concept. It does not mean a mere absence of war. Peace is a positive state which serves as the foundation of all human rights and duties and of all harmonious activities. Again, when we speak of international understanding, we do not mean mere knowledge of other countries' cultures and peoples, nor do we mean mere exchange of students, scholars and experts among different countries important though they are. By international understanding, we mean a responsible commitment to the idea and practice of the Family of Man. In other words, international understanding implies a commitment to that mode and ideal of consciousness in which mutual dependence of each upon all and of all upon each is indispensable. It implies a harmony of consciousness in which barriers collapse and perverse tendencies of domination, exploitation and oppression wither away. These deeper implications must find explicit recognition in the contents and methods of education. Corresponding to the need for universality and unity, emphasis should be laid on a dialogue for harmonisation of the cultures of the East and the West, and of humanities, sciences, fine arts, and technology. A new orientation towards the fullness of personality through a special kind of value-education is necessary for the purpose.

"The new type of human being that we seek to fashion through education for international understanding should be able to combine in himself the qualities of the scientist and the humanist. And the important theme to which we must address ourselves in this context is that of the synthesis of science and spirituality, which seems to hold the key to the needed transformation of human consciousness. This means a deeper quest and a bolder programme of research. May I suggest that UNESCO should consider enlarging the scope of the Major Programme XIII, which should eventually lead to the formation of a Resource Centre for Education for International Understanding. The aim of such a Centre would be to assist Member-States to develop contents and methods of the proposed new dimensions of education suitable to each country's genius and cultural identity.

"UNESCO rightly rejects the view that only a few should climb the heights of knowledge and culture while the rest should remain for ever on the lower ranges of achievement. Voicing the cry of the greatest leaders of mankind, UNESCO's concern is not for a few but for *all*, and it is this concern which has a special appeal to all humankind, and, particularly, to the people of developing countries. Unprecedented explosion of population and the rising figure of illiteracy call for concerted action and mutual assistance.

"A special problem that holds our attention is that of the girls' education and of the status of women.

span of its life. Physical infrastructure has been built, faculty has been developed, new vistas are being explored. Much has been done.

"I would like to allay the fears of those who may have felt that the autonomy of the University is being curtailed. I assure you with all the emphasis at my command that the Government have no intention whatsoever of tampering with the independent functioning of the university. Academic freedom is a valued asset and it cannot be nibbled at without detriment to the quality of higher education. The recent legislation has been promoted entirely by a sincere desire to improve the internal functioning of the university. Some of the forums were unwieldy in size; these have been reduced to manageable dimensions. Others did not have a balanced composition; balance has been restored by giving appropriate weightage to the faculty, the affiliated colleges, students, non-teaching staff, public men and the government. There was a feeling that the statutes and ordinances were being changed too often in order to favour individuals; so the procedure for amendment has been made more stringent. This is all that has been done and there is nothing here that may cause anxiety to any of you. Of course, there are always people whose main occupation is rumour-mongering and character assassination. It is best not to listen to them.

"I feel strongly that a University has to become the intellectual fulcrum of the society which it serves. It cannot afford to dissipate its energy in petty politicking, internecine battles, tension and unrest. It has to be a haven of peace, with a calm and unruffled atmosphere, where scholarly pursuits can be carried on with ease. It has to be a centre of excellence, of intellectual brilliance, a repository of knowledge and wisdom, which is capable of giving advice to government, business, industry and the professions on policies, programmes and projects. It should have a galaxy of agile minds, intellectually superior, which can outshine every other segment of society. If this aim is to be achieved, we have to assemble the best faculty from wherever it is available and to provide funds and facilities in abundant measure. It is our dream that the Himachal Pradesh University will live up to the expectations of the people of Himachal and earn a name for itself throughout the country.

"A university cannot remain immune from the influences of the larger society which supports it. In Himachal, we have come a long way from these days when Simla was the seat of the Imperial Government and the hills were only a sylvan retreat for the high and mighty in the land. With the dawn of freedom, there was an awakening in these remote, inaccessible, heavily forested areas.

"Dr. Yeshwant Singh Parmar, the builder of modern Himachal, was a statesman with vision. He rightly laid emphasis on the opening out of the interior through the construction of roads. He exhorted the people to adopt new occupations like horticulture, growing of potatoes and off-season vegetables, hops and mushrooms, rearing of Jersey and Holstein cows and merinto sheep, and weaving of carpets, shawls and other handicrafts. The result is a Himachal which is a beaconlight for other hilly areas in the country.

"It was but natural that our need for higher education should have kept pace with the rapid progress of the economy. The demands upon the educational system grew and the Himachal Pradesh University was established. It was soon realised that considerable importance had to be accorded to the achievement of academic and research excellence in agriculture and allied activities. That is how the Agricultural Complexes at Palampur and Solan started. After a short while it became clear that only a separate Agricultural University would be able to meet the need for technically qualified personnel.

"I am happy to note that both the universities have contributed immensely to the economic, social and intellectual advancement of the State. The two universities have had a history of amicable relationship and have developed several areas of complementarity. I am sure that both would travel together in an atomosphere of cooperation and harmony and serve as tools for the accelerated development of the State in all spheres.

"I will now refer briefly to the educational policy of the State Government. In the present climate of rising expectations, there are two conflicting demands being placed on the educational system. On the one hand, people clamour for more schools, more colleges, more universities, and rightly so because education is the passport to a higher standard of living and to social mobility. On the other hand, we are faced with the problem of the deteriorating quality of education, which is an amalgam of lack of infrastructural facilities, over-crowded classrooms, outmoded textbooks and harassed faculty. A time has come when we may have to cry halt to this race for quantity, and concentrate instead on the quality of education being imparted in our schools and colleges.

"Despite the efforts of more than three decades, we have still not been able to change our curricula to fit our own needs. There are many vestiges of the colonial era, from the bondage of which we have not yet been able to free ourselves completely.

"To take one example, our school taxtbooks give certain superficial biographical sketches of a few leaders of the freedom struggle, but the younger generation has grown up without any knowledge or comprehension of the great historical movement that is the foundation of modern India. There is an urgent need to prepare textbooks which give a graded introduction to the freedom movement in all its aspects, so that our students imbibe the virtues of patriotism and self-respect.

"Another instance is the relationship between man and his environment. Whole civilisations have vanished merely because people destroyed the ecological balance around their habitations. Today, when we clear forests for building roads, dams, electric transmission lines, housing projects, etc. we often forget that an un-bridled forest clearance programme can convert a living mountain into a desert. Conservation has, therefore, to become an integral part of the curriculum right from the primary classes and to continue upto the university level.

"Such instances can be multiplied. Population control, national integration, democratic principles, dignity of labour, moral and spiritual values—all these are subjects which have got to be taught to the younger generation if our nation is to survive and become great.

"That brings me to the last part of my presentation. Ultimately when we plan our educational system, devise our curricula and write our textbooks what we are aiming at is the transformation of every student into our conception of the ideal man. All of us have our own conceptions and it would be wrong on my part to assert that any of these conceptions is better or worse. I would only place before you my conception of the ideal man.

"My ideal man is a person who takes good care of his body, because it is the vehicle which carries the rest of his personality, but does not pamper it. He acquires wealth and power through legitimate means, not only with the purpose of living in moderate comfort and with some degrees of freedom in action, but primarily to use his wealth and power for the service of his fellowmen. His emotions are trained and within his control; they provide the impetus to his actions. His mind is emancipated. He has the courage to think for himself. He has got rid of superstitions and shibboleths. At the same time, he sees the intrinsic truth in ancient myths, the truth that is deeper than mere facts. He is not a cynic who believes that only the wicked prosper and the virtuous are doomed. He knows that life is a constant struggle between good and evil, not only outside us, but within each of us. He has imbibed the honesty, the pragmatism, the scientific temper, the dignity, the patriotism and the humanism of the west, and rejected its glamour and glitter, its hankering for sex and violence. He respects the customs and traditions of his society. He is proud of his country and prepared to give his all for its sake. He is disciplined, not because of fear or external controls, but by depth of understanding, wakeful alertness and heightened awareness. This is his religion and his God.

"Today, when the nation is going through troubled times, we should not remain helpless spectators of what is happening. These are the birth-pangs of a new civilization. The old feudal order is dying out, along with its social inequity, rigid casteism, ritualistic religion and economic exploitation. An egalitarian, secular, democratic, modern India is emerging. There is conflict between the old and the new. This is natural. But we should not be disheartened. No one from outside is going to help us. We have to stand on our own feet and fight with all that we have. We should analyse ourselves at every step and judge objectively. Are we siding with the old vanishing order or the newly emerging one? Are we with the exploiters or the exploited?

"And in this struggle, you, the students who are emerging from the university today, have to be in the vanguard. When you encounter corruption, don't throw up your hands in despair. Do something about it. When you see inefficiency, don't curse. Do something about it. We have to rebuild India. No one can pass the buck to another. Each one of us, wherever he is, has to participate in this noble national endeavour. May God grant us all the vision, the understanding, the courage and the patience to fulfil our historic roles in this struggle." □

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UP introduces pension scheme for varsity teachers

The U.P. Government has introduced a pension scheme, with gratuity benefits for university teachers in the state retiring on January 1, 1984 or later.

An official spokesman said that university teachers will be entitled to pension at par with and at the same rate as admissible to Government employees.

He said, the Government order, issued recently allows the choice to university teachers to opt for the new rules for securing pension, family pension and gratuity benefits, or to remain under the old rules under which they are entitled to their general provident fund money alone sans pension.

The Government order also provides for a family pension to the teachers in case they die in harness.

University teachers, opting for the new rules, will be entitled to a pension at par with Government employees on their superannuation at the age of 60 years, till alive, or to a family pension at the same rate on death in harness.

Under the other category, university teachers would be entitled to a family pension on death at par with normal pension, plus gratuity, if they opt for retirement at the age of 50 years. The gratuity will be admissible only when a teacher agrees to forego the Government share from his general provident fund money payable to him.

The spokesman said that pension will be calculated at 50 per cent of basic pay if it is up to Rs. 1,000 puls an additional 45 per cent of the next Rs. 500 increase in basic pay and 40 per cent as pension if the basic pay is above Rs. 1,500. The Government order also imposes a maximum limit of Rs. 1,500 payable as pension per month.

The spokesman said the gratuity payable is also subject to a maximum of sixteen and a half month's salary on the maximum service period of 33 years reckoned for its calculation and a minimum of 12 months' salary provided the university teacher agrees to forego the Government contribution from the general provident money payable to him.

PU seminar on social structure and development

The Department of Sociology, Panjab University, organised a 3-day seminar on Social Structure and Development from December 21 to 23, 1983 which was attended by about 30 social scientists from all over the country. The purpose of the seminar was two-fold—to share research with professional colleagues from other parts of India and to benefit from their works and to sensitize policy makers and development planners to the current issues.

Prof. V.S. D'Souza, a well-known social scientist, delivering the key-note address, called for a radical restructuring of society through the Gandhian path of "Satyagraha". Prof. D'Souza pointed out that the concept of economic development which was advanced as a panacea for all major problems of mankind had "not worked". There was therefore, a rethinking on the concept of development itself. Development meant making the individual self-reliant and creative. It stood for changing the personality of the individual.

Rejecting the existing theories of functionalism and conflict, Prof. D'Souza, said that "Satyagraha" is based on truth and love which are related to altruism and sociability inherent in man. Underlining the need for restructuring society, Prof. D'Souza said that though the conflict theory suggested a restructuring, it proposed violent revolution to achieve it.

Prof. R.C. Paul, Vice-Chancellor of Panjab University, who inaugurated the seminar said that the society has paid a social price for development in the form of heightened tensions and conflicts. Development brings about a "revolution of rising expectations" which, if not accompained by rapid developmental gains, could lead to frustrations and aggressive behaviour.

Open merit scholarships at MDU

An amount of about Rs. 50 lakhs has been set apart by the Maharshi Dayanand University, Rohtak in the form of scholarships to be awarded to meritorious students. The University has instituted an ambitious scheme of open-merit scholarships, without strict insistence on Haryana domicile, though, other things being equal, preference may be given to a candidate who comes from Haryana. 50% of the scholarships are reserved for rural candidates whose education for the first eight years has been in a village school. The deserving students can be given any number of scholarships. Scholarships, are available for the undergraduate courses : (Pre-University, Pre-Med/Pre-Engineering, B.A., B.Sc./B.Com. (Hons.) and Masters' courses in the subjects of English, Hindi, Sanskrit, Economics, Political Science, History, Physics, Chemistry, Mathematics, Sociology, Zoology and Psychology.

Upto ten, scholarships are available for candidates joining M.B.B.S. courses at the Medical College, Rohtak.

The amount of scholarship is Rs. 250/- per month. The candidates can also be given fee concession and grants for books in addition to the scholarship in exceptional cases. The scholarship will be tenable for the entire duration of the course. The aspirants for scholarship are required to have a minimum of 60% marks in the respective qualifying examination. Also the scholars will have to live in a university hostel so that they participate in the corporate life of the academic community.

Shanti sena camp at Gandhigram

A two-day Shanti Sena Camp was organised at Gandhigram Rural Institute recently for the organisers of the Village Peace Brigades of the Gandhi District Movement. 50 volunteers drawn from the villages of Reddiarchatram, Vedasandur, T. Kallpupatti, Batlagundu, Vadamadurai and Sanarpatti Blocks of Tamilnadu participated in the camp. The objectives of the two-day camp were: (i) to explain the concept of Shanti Sena and (ii) to give details regarding how to organise it, and plan the work programme.

In his presidential address Dr. M. Aram, Vice-Chancellor laid emphasis on the 'inner growth' of an individual for attaining perfection in human life. He pointed out that an ideal Shanti Sainik should aim at achieving inner perfection. Shanti-Sena is the need of the hour and it was the gift of Gandhiji and Vinobaji for India and mankind in general, he added.

Inaugurating the Camp, Rev. R.R. Keithan, stressed the need for Shanti Sena in the present international context. He opined that there is no dearth of good people in the world to think in terms of love and affection.

Sri N. Markandan, Co-ordinator of Extension activities of the Institute narrated how the village Shanti Sena is being organised in the service villages of G.R.I.

Sri V. Selvaraj, Co-ordinator of Gandhi District Movement described the efforts being made to transfrom the villages and towns of Madurai district on Gandhian lines. He felt that the village must be self-reliant in order to lessen their dependence upon outside agencies for development. Mrs. Minoti Aram, President, Lakshmi Mahalir Mandram, while enumerating the qualities of a Shanti Sainik, underlined the importance of devotion to God, observance of truth and non-violence in one's day-to-day life and endeavours.

Dr. N. Radhakrishnan, Chief Organiser of Shanti Sena demonstrated by means of a skit how a conflict situation could be resolved peacefully. Later the Shanti Sainiks were imparted training in yogasanas and rural sports.

World Punjabi conference at Patiala

"Efforts should be made to know and understand other languages and cultures while nursing, developing and enriching the Punjabi language and cuture", remarked Dr. S.S. Johl, Vice-Chancellor, Punjabi University while presiding over the welcome function for the delegates of World Punjabi Conference and a seminar on Punjabi Folklore, organised by the Department of Punjabi of the University recently.

Dr. Johl said that he had received assurance from the Birmingham University for setting up of a Punjabi and Sikh studies Centre in Birmingham.

Dr. Johl informed the delegates that Punjabi was the medium of instructions in all the colleges affiliated to the University and it was a compulsory subject there.

Dr. V.N. Tiwari, M.P., Chairman, Organizing Committee of the World Punjabi Conference, pleaded for establishing of an archives for the preservation of Punjabi culture at the Punjabi University. Dr. Tiwari said that there were enough means for the promotion of Punjabi Culture. The Chairman announced that the committees of the World Punjabi Conference will be established at district, national and international level.

Six publications brought out by the World Punjabi Conference were presented by Dr. Tiwari to Dr. Johl.

Dealing with the various hurdles in the promotion of Punjabi language Dr. Gurcharan Singh Arshi in his paper "The problems of Punjabi Culture" dwelt upon the political division of Punjab in 1947 and consequent variations in the Punjabi language. He feared that there was a crisis to the identity of the Punjabi Culture at this juncture.

Dr. Harbhajan Singh of Delhi in his paper "Punjabiat Da Lok Mohandra" dwelt upon the two books brought out by Mr. Tomyo Mazhaki, a Professor of Punjabi from Japan who spoke fluent Punjabi.

Mr. Amarjit Singh Dhillon, Director, Planning and Development, shared with the delegates of the World Punjabi Conference, various projects undertaken by the University for development of the Punjabi language.

Prof. Dalip Kaur of Punjabi University welcoming the delegates to the World Punjabi Conference

Protonic thermocurrents discovered in Cochin University

A new physical phenomenon termed as 'protonic thermocurrents' or 'thermally stimulated protonic currents was discovered in the Solid State Electronics Laboratory of the Cochin University's Department of Physics.

The phenomenon was observed by Dr. C.P. Girijavallabhan and Dr. U. Syamaprasad during their extensive studies on the electrical properties of a crystal of lithium ammonium sulphate. Specimens in the form of single crystal of this material when polarised at very low temperature and then steadily warmed, gave bursts of electric currents. The investigators conclusively proved that these currents were due to the migration of the protons liberated from the ammonium group in the crystal.

The above findings are of considerable significance in the context of the wide interests of workers in laboratories all over the world in a class of material called superionic conductors which have excellent potential in connection with the development of solid state batteries, solar energy converters, thermal switches etc.

The details of the above discovery have appeared in the American research journal "Physical Review" (Vol. 26B).

International Seminar on Saiva Siddhanta

An International Seminar on Saiva Siddhanta is to be organised at Dharmapuram, Tamil Nadu, India, during 3rd, 4th and 5th February, 1984 under the joint auspices of Bharathidasan University, Tiruchirapalli and Dharmapuram Adhinam, Dharmapuram.

This International Seminar on Saiva Siddhanta is meant to bring together eminent scholars in Saiva Siddhanta all over the world by providing a forum at an international level for the participating scholars to discuss the following aspects: (1) Saiva Siddhanta and other Indian Philosophical Thought. (2) Saiva Siddhanta and other Asian Schools of philosophy; and (3) The Relevance of Saiva Siddhanta to the modern world including the West.

More than twenty delegates from foreign countries like England, Malaysia and Sri Lanka have already registered and nearly another hundred delegates from within the country and places like the United States of America, Singapore, Hawaii, South Africa, etc., are expected to participate in the Seminar.

Re-structuring of courses at Madurai Kamaraj

The re-structurisation of the courses under the Open University System and the redrafting of the syllabi are in the offing. With effect from June 1984, these courses will comprise :

(1) an Introductory Course for a duration of one year from June to March;

(2) a Pre-Foundation Course for a duration of one year ending with a university examination; and

(3) a Foundation Course for a duration of two years (Foundation Course I year and Foundation Course II year), each year ending with a university examination.

The syllabi of the above courses have been brought on par with those of the Tamil Nadu Secondary and Higher Secondary Education courses.

The Syndicate of the university has extended the period of study to one year from 1984 on-wards and approved the redrafting of the Open University System syllabi. A proposal to prescribe four optional subjects under part III of the foundation courses I year and II year from 1984-1985 has also been approved.

A health village for Manipal and medicare for Udupi

The establishment of a "health village" in which all facilities to promote the health of young and old people would be available, the extension of "medicare" to the people of Udupi and the

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AIU to organise In-service Training Programmes for University Administrators

One of the objects of the AIU is to facilitate communication, coordination and mutual consultation among universities. Keeping this in view, the Association proposes to organise in-service training courses for university administrators. The President, Prof. R.C. Paul, Vice-Chancellor, Panjab University appointed a Committee consisting of the following persons to consider this matter: Dr. S.N. Mehrotra, VC, Jodhpur; Dr. B.M. Shukla, VC, Gorakhpur; Dr. G. Ram Reddy, VC, APOU, Hyderabad; Shri Kirpa Narain, VC, GB Pant University; Prof. S. Sampath, Director, IIT Kanpur and Dr. R.K. Poddar, Ex-VC, Calcutta. It has been recommended that two programmes may be arranged in a year: (i) for Controllers of Examinations, Deputy Registrars and Assistant Registrars and (ii) for Registrars and Finance Officers.

In order to have an effective participation, the group may consist of 20 persons and the duration of the course may be one to two weeks. The sponsoring universities may meet the travel, board and lodging expenses of the participants during their training period and the officials may be treated on duty.

These programmes would offer the trainees an opportunity to discuss current problems of their universities and their solution. In order to pool the experience of different university systems, such programmes would provide a forum for exchange of views and meaningful inter-action among such officers who do not get opportunities to meet their counterparts in other universities.

For efficient organisation of these programmes and courses, collaborations would also be sought from the Indian Institute of Public Administration, National Institute of Planning and Administration and other member universities and organisations located in Delhi. These programmes may be organised in Delhi or in other cities at the convenience of the host university.

strengthening of the Udupi centre of Kasturba Hospital were among the subjects discussed by the Supreme Governing Body of the Academy of General Education in Manipal recently.

The members of the Governing Body were informed that the government had recognised Kasturba Hospital, Manipal, as an independent institution. While the proposal to have a separate hospital for the K.M.C. in Mangalore was under consideration, the establishment of a 150-bed hospital in Udupi would be taken up soon for implementation. The setting up of the "health village" would also receive urgent attention.

The income ceiling of Rs 4,550 for being eligible for "medicare" benefits, had been raised to Rs.6,000 to cover a larger number of people, it was stated.

Endowment for N.S.S. in Bharathidasan University

Perhaps, for the first time in the country an Endowment for National Service Scheme has been created in the Bharathidasan University.

On the occasion of the First Anniversary of the University, organised by the citizens of Tiruchirapalli, among others, an Endowment for Rs. 30,000/- in the name of Hon'ble Chief Minister of Tamil Nadu, Thiru M. G. Ramachandran, for National Service Scheme has been instituted.

This Endowment will be used for presenting an annual award for the best functioning N.S.S. College in this University. A Committee has been constituted to select the best functioning N.S.S. College in the University for award in the current year. The Committee will evolve the criteria for the award and also the form of the award to be presented.

Additional seats in M.Sc. at PAU

The Academic Council of Punjab Agricultural University approved the creation of additional seats in the Master's Programme in the Department of Veterinary Pharmacology (1), Veterinary Medicine (1), Food Technology (2) and Botany (3).

The Council also decided to divert two seats from M.Sc. (Horticulture) to M.Sc. (Landscaping and Floriculture).

Panjab University to discontinue Honours in Economics

In order to conserve resources and let the faculty concentrate on post-graduate teaching and research, it has been decided by the Syndicate of Panjab University to abolish the Honours School System in the Department of Economics. As a consequence, no admissions to the First-Year class of B.A. (Honours School) would be made in 1984.

Commonwealth Secretary-General visits BHU

Mr. S. Ramphal, Secretary General of the Commonwealth visited the Banaras Hindu University after conclusion of the Commonwealth Conference at Delhi.

The Vice-Chancellor of Banaras Hindu University, Prof. Iqbal Narain accorded a warm welcome to the Commonwealth Secretary General at his residence. Mr Ramphal visited Bharat Kala Bhavan on the campus. He discussed various academic activities and faculty programmes with the Vice-Chancellor. During their talk Prof. Iqbal Narain discussed various academic exchange programmes and co-operation with the Secretary General among the Commonwealth nations.

Mr. Ramphal disclosed that the last conference of the Commonwealth Universities had constituted a Committee of the Vice-Chancellors for the exchange programmes of the scholars at the University level among the member nations. Recommendations of the committee have been received recently which will be implemented soon.

Mr. Ramphal took interest in the economic and cultural developments of Banaras. He said that during his visits to India, he met scholars and people for the acquaintance of various things.

Mr. Ramphal receiving a gift from Prof. Iqbal Narain.

Gorakhpur University students union elections —with a difference

Even before the happy memories of the University Silver Jubilee convocation could fade, the University students got busy with their elections. The elections to the students union passed off peacefully without any untoward incident. Many new things happened this year in the University, some of them a pleasant surprise. This year after a decade or so, the University buildings were shining and not a single slogan or name was found written anywhere. This was a happy development in the sense that it saved the University about Rs. 85 thousand which it had to spend on white-washing and painting etc. after Union elections last year. This was also the first year when a large number of colourful banners and hoardings were seen all-around not only on the campus but pracatically all over the town. This was also said to be the first year when the girl students came out to take charge of the microphone and moved about in cars and jeeps canvassing for one candidate or the other.

Calicut Varsity's School of Drama

One of the recent additions to the University of Calicut and situated at Dr. John Matthai Centre, Aranattukara, at the outskirts of Trichur Town, Kerala State, is the School of Drama. The Department at present has a three year Degree Course in Theatre Arts termed as B.T.A. (Bachelor of Theatre Arts) consisting of six semesters. The course is basically designed to be a practical oriented one, giving adequate place for the study of Kerala's tribal rural and sophisticated traditional forms. The first semester is completely devoted to the study of Kerala. Theatre and the 'Natyasastra' tradition which is practically being taught by the Master Artistes in the field. This is followed by European theatre upto the 19th century., Malayalam Theatre Contemporary Indian Theatre and Modern World Theatre. There are three optionals offered from the 3rd semester: Direction, Acting and Children's theatre and the merit of the students decided mainly on the basis of their project productions. A Film Appreciation Course in the third semester is conducted with the assistance of the Film and Television Training Institute, Pune. A Film Training at the studio of the Kerala State Film Development Corporation is part of the last semester. Each student should submit, in the last semester, a dissertation on any subject connected with his studies. Acting exercises are compulsory for all, which include Kalaripayattu, Yoga and Circus besides the generally accepted exercises. The maximum number in a batch is 15 and an aptitude test is conducted before admission.

The ultimate aim of the University, as well as its Faculty and Board of Studies, is to develop this department into a Performing Art Centre in Kerala.

We Congratulate

- Professor S.V. Chittibabu, Vice-Chancellor, Annamalai University has been reappointed as Vice-Chancellor of the Annamalai University for another term of three years with effect from 24.12.1983.
- Shri N. Raghava has been appointed as Vice-Chancellor-in-charge of Andhra University with effect from 15th December, 1983.
- Prof. S. Bhattacharya has taken over as Vice-Chancellor of Calcutta University with effect from 31st December, 1983.

AIU News

Gandhiji University wins women team title at Trivandrum

Inter-University Athletics Meet was recently concluded at Trivandrum. It was encouraging to note the Gandhiji University, Kottayam (latest addition to the membership with the AIU) claiming the Women's Team Title with a tally of 39 points in its maiden appearance. Calicut University with 37 points took second place and Mangalore University occupied third place by capturing 35 points.

Guru Nanak Dev University, de-throned reigning champions — the hosts Kerala University to win the Men Team title with a tally of 38 points, relegating them to finish third with 29 points. Punjabi University, Patiala gained the second spot by securing 30 points.

Prem Singh, a student of Guru Nanak Dev University, Amritsar was adjudged the best Men Athlete while women's best athlete was Shiny Abraham of Gandhiji University. Vandana Rao of Mangalore University won the 100 meters and 200 meters for women bringing a doubled victory for her University.

Combined universities Volleyball (Men) team raised for the first time

Combined Universities Volleyball players will be seen in action for the first time in the Federation Cup Volleyball Tournament being held at Calicut from 7th to 12th February, 1984. Best eight teams from the country are chosen by the Volleyball Federation of India to participate in the above Tournament. The trials for selecting the Combined Universities Team are being held at Trivandrum on 25th & 26 January, 1984. The team so selected will undergo a Coaching Camp at Trivandrum before its participation in the Federation Cup.

News from Agril. Varsities

PAU strategy for 1984

Dr. Sukhdev Singh, Vice-Chancellor of the Punjab Agricultural University said that the University was passing through a grave financial crises on account of fast rate of inflation and rising prices. He further said that to combat the financial crises and cut imposed by the State Government, strict economy measures were being adopted in the University. Desipte financial hardships the construction work in hand was being completed. A cotton technology laboratory, seed testing laboratory, sheds for small animals had been completed. A cafeteria was fast coming up. More residential houses would be constructed when funds were available.

The Vice-Chancellor was addressing the faculty on the installation ceremony of the newly elected Punjab Agricultural University Teacher's Association (PAUTA) recently.

Giving an outline of the research programmes the Vice-Chancellor said that a research station on dry land farming with the World Bank Assistance had been established in the Kandi area of Hoshiarpur District, which when completed would be a model for the entire country. The research conducted at this station would benefit those areas where tubewell or canal irrigation was not available. Another research station was being established at Bhatinda to conduct specific research on cotton and brackish water for which financial aid was awaited from the State Government for the purchase of land and the construction of infrastructure, research on tick fever disease which harmed the hybrid animals would also be taken up on priority basis.

The Vice-Chancellor called upon the faculty to raise the academic standard of Postgraduate level and motivate the students to compete for the Indian Administrative Service, Defence Services and for jobs in the commercial banks.

Dr. G.S. Sandhu, President of PAUTA assured that the faculty would try its best to uphold the high traditions of the University and raise its academc standards. He urged that the University should encourage the young scientists and more facilities be provided to them.

HAU scientists develop new wheat variety

Scientists of Haryana Agricultural University have evolved a new wheat variety WH-291 for late sown conditions. This variety is significant in view of the wide acceptance of the paddy-wheat and cotton-wheat crop rotation by farmers of Haryana.

This variety is an improvement on Sonalika variety released during the year 1968 which is the only variety adoptable for late sown conditions not only in Haryana but in the whole of the country. But, as Sonalika variety has become highly susceptible to brown rust, which does extensive demage, it is unsafe to grow it on a large scale.

The new variety WH-291 evolved by the HAU scientists has been identified for cultivation in the north-western plain zones of the country. According to Dr. R.P.S. Tyagi, Director of Research, it has yielded 34.8 quintals per hectare against 33.7 quintals per hectare of Sonalika. During the current year this variety was tested extensively in three sets of trials of various locations in Haryana. In these tests besides Sonalika, another variety HD-2285, also identified for late sown conditions, was also included. Results showed the superiority of the new variety in yield over both HD-2285 and Sonalika, indicating yield advantage of 5.4 quintals per hectare and 3.9 quintals per hectare repectively over these varieties. It out yielded Sonalika by a significant margin in Gujarat also.

Indian society of soil sciences institutes a medal

The Indian Society of Soil Sciences of Haryana Agricultural University (HAU) has decided to institute a gold medal for the best M.Sc. student in soil sciences. The medal, in the name of Dr. S.D. Nijhawan, an eminent soil scientist, would be awarded every year at the Annual Convocation.

The institution of the medal of Dr. S.D. Nijhawan Gold Medal was approved at a recent meeting of the Board of Management of HAU.

Virology conference at HAU

'A multi-disciplinary approach in research is necessary to conquer the virus diseases of men, animals and plants', said Dr. C.M. Singh, Deputy Director (Rtd). Indian Veterinary Research Institute (IVRI). He was speaking at the inaugural function of the Virological Conference recently. He further said that many problems in the area of agriculture, veterinary and medical fields like polio and measels in men and foot and mouth disease in animals are some of the major problems and their control will go a long way in improving health and happiness of mankind. He emphasised that scientists should take up research work on virus diseases which are transmitted by fungi and attempts should be made to establish culture collection of viruses as well as sera bank. In view of the present problems scientists should not depend entirely on human virology alone.

Earlier the conference was inaugurated by Dr. S.P. Raychaudhary, (Rtd.) Head of Division, Indian Council of Agricultural Research and eminent plant pathologist. This conference was organised at HAU in collaboration of the Indian National Science Academy and the Department of Science and Technology, Govt. of India.

40 delegates from all over India took part in the conference.

RESEARCH IN PROGRESS

AIU LIBRARY

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Goswami, Kailash Chandra. *Density topology and its study on some abstract measure spaces : A study in topology for analysis.* Gauhati U.

2. Kalita, S.C. *Groups of automorphisms of compact Riemann surfaces.* Gauhati U. Dr. B.P. Chetia.

3. Patra, Kuntala. *Meta-Abelian groups of automorphisms of compact Riemann surfaces.* Gauhati U.

Physics

1. Aloka, Prabhakar. *Composite remarks in relativistic and non-relativistic theory.* U. Delhi. Dr. K. Datta.

2. Bartwal, Kunwar Singh. *Solid state electronics studies of structural and electronic behaviour of layered crystals.* BHU Varanasi. Prof. O.N. Srivastava.

3. Das, S.N. *Resistive transition of thin super conducting films.* U. Delhi. Dr. P.N. Dheer.

4. Khattri, Ravinder Kumar. *Molecular spectroscopy and molecular biophysics.* U. Delhi. Dr. M.K. Machwe.

5. Misra, Abani Kumar. *Some studies of scaling and scale breaking in particle physics.* Gauhati U. Dr. D.K. Choudhury.

6. Pandey, R.K. *Some problems in atomic and molecular physics.* U. Delhi. Dr. R.P. Saxena.

7. Patgiri, K.K. *Fission track ages of some of the pegmatites and granites from Gauhati and its surroundings.* Gauhati U. Dr. T.D. Goswami and Dr. C.C. Bhattacharyya.

8. Patra, Manasa Kumar. *Group of representations.* U. Delhi. Dr. K.C. Tripathy.

9. Puttanna, H.S. *Low temperature physics : Resistive transition of super conducting films.* U. Delhi. Dr. P.N. Dheer.

10. Rahman, K. *Ionospheric studies based on geostationary satellite observations from Gauhati.* Gauhati U. Dr. (Mrs.) M. Devi.

11. Rastogi, Alok Kumar. *Investigation of dielectric guides of microwave frequencies.* U. Delhi. Prof. G.P. Srivastava and Dr. K.N. Tripathy.

12. Shukla, Ashok Kumar. *Electronic transport properties of semiconductors.* U. Delhi. Dr. P.C. Mathur.

13. Singh, Nand Pal. *Studies on polycrystalline silicon solar cells.* U. Delhi. Dr. B.K. Das and Dr. Raj Rup.

14. Singh, Thoudam Nandababu. *Fission track studies in some minerals and water from the North East-India.* Gauhati U. Prof. K.M. Pathak and Dr. P.K. Choudhury.

15. Veena. *Some aspects of group representations in physics.* U. Delhi. Dr. K.C. Tripathy.

16. Vikram Singh. *Computer aided study of ±behaviour in gas mixtures.* U. Delhi. Dr. P.S. Grover.

17. Vinod Kumar. *Thin film semiconductor transducers.* BHU, Varanasi. Dr. Rama Swami.

18. Yogesh. *Multiparticle production in deep inelastic processes in Parton model.* HPU, Simla. Dr. R.P. Bajpai.

Chemistry

1. Das, Pranab Jyoti. *Studies on coupling of aryl diazonium chlorides with indole in acidic and alkaline medium.* Gauhati U. Dr. P. Sharma.

2. Das, Sanjib. *Chemical examination of medicinal plants of North East Region of India.* Gauhati U. Dr. R.P. Sharma and Dr. (Mrs.) A. Choudhury.

3. Dutta, Uttara. *Synthetic study with heterocyclic compounds.* U. Delhi. Dr. V.K. Ahluwalia.

4. Geetha, C.N. *Organometallic chemistry.* U. Delhi. Dr. R.K. Multani.

5. Mattu, Sushma. *Co-ordination chemistry.* U. Delhi. Dr. S.K. Sindhwani.

6. Mercykutty, P.C. *Phosphines complexes of metals.* U. Delhi. Dr. P.N. Kapoor.

7. Tyagi, Sunita. *Some new organometallic compounds of molybdenum.* U. Delhi. Dr. R.K. Multani.

Earth Sciences

1. Bhattacharya Sharmah, Aruna. *Studies on the Lekadong limestone and Lekadong sandstone (Sylhet limestone stage) of the shell formation with special reference to the sedimentology of the limestone, Cherrapunjee areas, Meghalaya.* Gauhati U. Dr. D.N.D. Goswami.

2. Choudhary, Chandan Kumar. *Chambal river bed land.* U. Delhi. Prof. V.K. Verma.

3. Das, Asit Kumar, *Petrological study of the precambrian rocks of the Khanapara-Sonapur area, Kamrup Distt. Assam.* Gauhati U. Dr. M.N. Rao.

4. Goswami, H.C. *A Study on seismic risk in the North-East Indian region.* Gauhati U. Dr. S.K. Sarma.

5. Hazarika, Lalit Kumar. *A study of the precambrian rocks of the Mairgang Area, Meghalaya.* Gauhati U. Dr. C.C. Bhattacharyya.

6. Jain, Aklesh Kumar. *Chenab river geomorphology* U. Delhi. Prof. V. K. Verma.

7. Naug, Bhaskar Jyoti. *Fluvial ichnology*. U. Delhi. Dr. S.K. Tandon.

8. Pathak, Basant Kumar. *Soil, geology and land use investigations in Beas catchment area.* Delhi. Prof. V.K. Verma and Dr. R.A. Chansarkar.

9. Ravindra Kumar. *Study of neogene benthic Foraminifera from Andaman Nicobar Islands.* U. Delhi. Dr. V. Sharma.

10. Sil, Debabrata. *A Study of the ore environment in the Northern sector of the Pur-Banera Belt, Bhilwara District, Rajasthan.* U. Delhi. Dr. Mihir Deb.

11. Srivastava, S.K. *Extraction geochemistry of pelagic-sediments associated with deep sea manganese nodules and their implication to the genesis of nodules.* U. Delhi. Dr. C.S. Roonwal.

12. Wahi, Sanjay. *Ore geology*. U. Delhi. Dr. M. Deb.

Engineering & Technology

1. Rajarao, Yesoda. *Dual mode T.W.T.* BHU, Varanasi. Prof. R.K. Jha and Prof. D.S. Venkateswarlu.

BIOLOGICAL SCIENCES

Anthropology

1. Roy, Tapash Kumar. *Genetics of total manus counts in man.* Gauhati U. Dr. Renuka Das.

2. Sakhitombi Devi, K. *Physical growth in the Meitei kshatriya and muslim girls of Imphal, Manipur : A cross-sectional study.* Gauhati U. Dr. B.M. Das.

Biochemistry

1. Bhuyan, Adity. *Reproductive performance and biochemical profile of female albino rat treated with indigenous plant of N.E. region.* Gauhati U. Dr. P. Goswami.

2. Cameotra, Swaranjit Singh. *Studies on the mechanism of hydrocarbon utilization by microorganisms.* Gauhati U. Dr. H. Singh.

3. Raja, P.S. *Study of the effect of carcinogen on some of the enzymes in growing chick embryo.* Gauhati U. Dr. P. Goswami.

4. Sharma, Rakesh. *Hormone and vitamin interactions in regulation of rooting in stem cutting.* HPU, Simla. Dr. V.K. Rai.

5. Vyas, Purnima. *Possibility of using serum hepatoglobin estimation as a tool in identification of certain conditions.* Devi Ahilya, Indore. Dr. A.P. Bhandarkar.

Botany

1. Batt, Rajendra Prasad. *Systematics and ecobiology of some Agaric families.* HPU, Simla. Dr. T.N. Lakhanpal.

2. Biswas, Santi Kumar. *Studies on infection and rotting of Lycopersicum fruit by Alternaria Sp. with emphasis on disease reaction and enzyme substrate relationship.* Gauhati U. Dr. D.N. Baishya.

3. Dubey, Shashi. *Ecophysiological studies of some forest trees.* H.S. Gour, Sagar. Dr. S.P. Vajpai.

4. Jain, Rashmi. *Chemotherapy of mycotic otitis externa caused by some species of Aspergillus and Penicillium.* H.S. Gour, Sagar. Dr. S.C. Agarwal.

5. Nandi, Mita. *Ultrastructural and histochemical studies of some food legumes.* U. Delhi. Dr. C.B. Seghal.

6. Ropiangliana. *Studies on the genetics and breeding behaviour in rice.* Gauhati U. Dr. B. Goswami.

7. Sadik, Yasmin. *Studies on the role of phenolic compounds in the disease resistance in plants.* H.S. Gour, Sagar, Dr. K.M. Vyas.

8. Sengar, Anil Kumar. *Studies on allelopathy among weeds and crops.* H.S. Gour, Sagar. Dr. S.P. Vajpai.

9. Thomas, Sophy. *Embryology of angiosperms.* U. Delhi Prof. R.N. Kapil.

10. Tiwari, Archana. *Eutrophication and polllution studies in Sagar Lake.* H.S. Gour, Sagar. Dr. S.P. Vajpai.

11. Tripathi, Subhash Chandra. *Primary production and nutrient uptake by Eucalyptus plantations.* BHU, Varanasi. Dr. G.N. Choudhary.

Zoology

1. Arunasmithasri, A.S. *Endocrinology*. U. Delhi. Dr. K. Muralidhar.

2. Chauhan, Usha. *Studies on the mating behaviour and cytological mechanisms of dichotomous spermatogenesis in potato tuber moth, Phthorimaea operculetta Zeller.* HPU, Simla. Dr. L.R. Verma.

3. Chhaya Devi, Chintama Neni. *Factors regulating melanin synthesis in human skin.* U. Delhi. Dr. K. Muralidhar and Dr. A. Ramaiah.

4. Kalita, Jatin. *Vitamin A metabolism in fresh-water fish with reference to its role in growth and occurrence.* Gauhati U. Dr. U.C. Goswami.

5. Madhusudhana Rao, K. *Hypothalamo-hypophyseal complex and related problems of Indian and Chinese carps.* BHU, Varanasi. Dr. A.V. Natarajan and Prof. A.G. Sathyanasan.

6. Mahapatra, Rita. *Sterols in insects.* U. Delhi. Dr. H.C. Agarwal.

7. Rajendra Kumar. I. *Endocrinology (biochemical).* U. Delhi. Dr. K. Muralidhar.

8. Samual, Thomas. *Organochlorine pesticide residue dissipation in environment.* U. Delhi. Dr. R.C. Aggarwal and Prof. M.K.K. Pillai.

9. Samuel, Rachel. *Effect of some environmental factors on the biology of Lasioderma serricorne F. (Coleoptera: Anobiidae).* U. Ker, Trivandrum. Dr. V.K.K. Prabhu.

10. Sarma, S.S.S. *Zooplankton ecology*. U. Delhi. Dr. T.R. Rao.

11. Sushma Rani. *Studies on inhibin and inhibin like substances.* U. Delhi. Dr. K. Muralidhar.

12. Umesh Kumar. *Cytogenetic studies on insects.* U. Delhi. Prof. S.R.V. Rao.

13. Vijay Lakshmi. *Role of accessory glands in insect reproduction.* U. Delhi. Dr. S.S. Seghal.

Medical Sciences

1. Agrawal, Sharmila. *Stress, stress reaction and adaptation pattern in relation to different body types.* BHU, Varanasi. Dr. K.N. Udupa and Dr. G.P. Dubey.

2. Dhawan, Alok. *Controlled drug delivery and targeting.* H.S. Gour, Sagar. Prof. K.C. Verma.

3. Khubchandani, Murlidhar. *Formulation and product development of suspensions, semisolids and aerosols.* H.S. Gour, Sagar. Prof. S.N. Sharma.

4. Lodhi, Narayan Singh. *Preparation and evaluation of some gastric antacids.* H.S. Gour, Sagar. Shri R.K. Upadhyay.

5. Rana, Avtar Chand. *Phytochemical and pharmacological studies on medicinal plants with special reference to their use in fertility control.* H.S. Gour, Sagar. Dr. D.D. Santhani.

6. Sharma, Krishna Kumar. *The concept of anupan in Ayurveda.* BHU, Varanasi. Prof. L.V. Guru and Dr. R.H. Singh.

7. Yadav, Mange Ram. *Synthesis of heterosteroids of medicinal interest.* Pb. U. Chandigarh. Prof. Balkishan Singh and Dr. Dharam Paul.

Agriculture

1. Aziz, Chhote Lal. *A Study of impact integrated rural development programme of District Allahabad, U.P.* Kanpur U. Dr. V.B. Singh.

2. Barua, Anjan *Studies on certain plant metabolites and essential* oil content with reference to *Curvularia verruciformis.* Gauhati U. Dr. D.N. Bordoloi and Dr. C.M. Sarma.

3. Bujarbarua, Aparna. *Studies on relative growth, development and productivity of certain economic plants.* Gauhati U. Dr. P.P. Wananan.

4. Choudhury, S. *Studies on the growth, yield and oil quality of Ocimum gratissimum Linn.* Gauhati U. Dr. D.N. Bora and Dr. P.P. Wamanan.

5. Mohammad Motiur Rahman. *Induction of mutation by X-ray irradiation with special reference to male sterile and reciprocal translocation in jute, Corchorus capsularis* L. Gauhati U. Dr. L.C. Goswami.

6. Sarma, B. Devi. *Physiological studies on the effect of plant growth regulators on the germination and vegetative growth of radish, Raphanus sativus.* Gauhati U.

7. Sarma, Prafulla Chandra. *Cytogenetical and morphological studies on some triploid tea, Camellia sinensis L. produced from tetraploid-diploid crosses.* Gauhati U. Dr. H.P. Bezbaruah and Dr. L.C. Goswami.

8. Singh, Vinod Kumar. *A study of the diffusion and adoption of agricultural innovations in the district of Gorakhpur, Eastern U.P.* Kanpur U. Dr. V.B. Singh.

Horticulture

1. Abdul Mazid. *Studies on the genetic parameters and yield components in apple, Malus sylvestris Mill.* Kanpur U. Prof. R.K. Sharma.

2. Gupta, P.K. *Studies on morphology, growth, yield and chemical composition of large cardamom, Amomum sabulatum Roxb.* Kanpur U. Prof. R.K. Sharma.

3. Jagdish Narain. *Control of vegetative growth in grapevine, Vitis vinifera* L. *by spray application of growth regulators by tipping and tapping of shoots.* Kanpur U. Dr. S.D. Khanduja.

4. Katiyar, Ram Saran. *Genetical and correlation studies among yield and its components in bitter gourd, Momordica charantia* L. Kanpur U. Dr. A. Prasad.

5. Pal, Radhey Shayam. *Studies on nitrogen and potash nutrition in guava in relation to yield and quality.* Kanpur U. Dr. R.P. Srivastava.

6. Pandey, Uma Chander. *Studies in the genetic parameters of yield and its components in guava, Psidium guajava L.* Kanpur U. Dr. A. Prasad.

7. Saklani, Upendra Dutt. *Effect of light intensity and plant growth regulators on the growth, yield and quality of tomato.* Kanpur U. Dr. R.P. Srivastava.

8. Sarkar Govind Kumar. *Studies on nitrogen and potassium fertilization of litchi in relation to growth, yield and quality.* Kanpur U. Dr. R.P. Srivastava.

9. Sharma, I.P. *Investigations on growth attributes and genetical parameters with yield in carrot, Daucus carota* L. *varieties* Kanpur U. Dr. A. Prasad.

10. Singh, J.B. *Studies on varietal intensity, their yield and economic components in mango, Mangifera indica* L. Kanpur U. Dr. A. Prasad.

11. Singh, Ravindra Nath. *Effect of phosphate levels, culture and time of sowing on growth, yield and quality of pea, Pisum sativum* L. Kanpur U. Prof. R.K. Sharma.

12. Srivastava, Ashok Kumar. *Studies on floral biology, palynology, fruit set and fruit quality of Psidium molle B.P. guinense Swp. Fridricksthall anum NDz, P. cattleinum var. lucidium Sab., P. polycarpum Al. Anderson.* Kanpur U. Dr. Gauri Shankar.

13. Srivastava, Sant Kumar. *Nutritional studies on fennel (saunf) Foeniculam vulgare Mill.* Kanpur U. Prof. B.K. Sharma.

14. Sukla, Shambhu Nath. *Effect of nitrogen, phosphorus and potassium on the growth and yield of turnip, Brassica repa* L. Kanpur U. Prof. R.K. Sharma.

15. Tripathi, Swarajya Prakash. *Studies on nitrogen and potash nutrition of plum in relation to growth, yield and quality.* Kanpur U. Dr. R.P. Srivastava.

16. Upadhaya, Shiv Narain. *Studies on the growth, yield and quality of red delicious apples as affected by different interstocks.* Kanpur U. Dr. R.P. Srivastava.

17. Vijay Shanker. *Root-stock studies on Srinagar orange.* Kanpur U. Dr. R.P. Srivastava.

Veterinary Science

1. Singh, Devendra Nath. *Nutritional studies on growing ruminants.* BHU, Varanasi. Dr. V.N. Bhargava.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Balachandra Rao, S. *Linear and nonlinear stability of flows through porous media using special analysis.* Bangalore U.

2. Basu, Juthika. *On problems related to the stochastic models in thermodynamics.* U. Calcutta.

3. Basu, Manabendranath. *Some features of turbulence erodic principle and corresponding mapping phenomena.* U. Calcutta.

4. Rai, Vijay Shankar. *A study of extended Bernoulli, Euler and Eulerian polynomials.* BHU, Varanasi.

5. Saha, Bhuluranjan. *Some aspects of transport processes in turbulence.* U. Calcutta.

6. Shri Kant. *A generalized Appell-function of two variables and the polynomials* $A_{\cdot}(x, y)$. BHU, Varanasi.

7. Singh, Mahesh Prasad. *Some contributions to the general theory of relativity.* LNMU, Darbhanga.

8. Singh, Ram Kishore. *Some contributions to the fixed point theory.* Mag. U. Bodh Gaya.

9. Singh, S.P. *Some problems on approximation of functions by positive linear operations.* U. Roorkee.

Statistics

1. Mandal, Nripeskumar. *Response surface designs for locating the optimum.* U. Calcutta.

2. Panda, Rajendranath. *Contributions to response surface designs.* U. Calcutta.

3. Singh, Kaushalendra Kumar. *Some analytical models for couple fertility and their applications.* BHU, Varanasi.

Physics

1. Agrawal, Anil Kumar. *Mechanism of energy transfer processes between trivalent rare earth ions.* Kum. U. Nainital.

2. Balakrishnan, I.S. *Some physical problems in clinical radiation dosimetry including design of certain treatment aids for radiotherapy.* U. Ker. Trivandrum.

3. Bhattacharjee, Basana. *X-ray and spectroscopic studies on some liquid crystals.* NBU, Rajarammohunpur.

4. Bora, Bhubaneswar. *Studies on low frequency (few MHz) radiosignals associated with extensive air showers.* Gauhati U.

5. Choudhury, Chandrakala. *Semiconductor selective coatings and their applications in Cylindrical solar collectors operating under concentrated flux.* IIT, Delhi.

6. Choudhury, Ira. *Ionic conduction in polar dielectric liquids.* NBU, Rajarammohunpur.

7. Das, Saktipada. *Investigation on some characteristic properties of glow discharge.* NBU, Rajarammohunpur.

8. Datta, Dhurjati Prasad. *Analyticity of Schrodinger energy levels for Quark-confining potentials.* NBU, Rajarammohunpur.

9. Datta, Rathindra Kumar. *Studies on the dielectric properties of some polar liquids and salt solutions at radio and ultrahigh frequencies.* NBU, Rajarammohunpur.

10. Enjeti, Lakshmi. *Reactive sputtering of gallium nitride thin films and the electrical characterisation of GaN/GaAs metal insulator semiconductor diode structures,* IIT, Delhi.

11. Jha, Biswanath. *Studies on liquid crystals.* NBU, Rajarammohunpur.

12. Joseph, Porathur Vareed. *Inter annual variability of Indian summer monsoon rainfall.* U. Poona.

13. Khatri, S.S. *Motional states of* NO_2 *and other ions in Kl single crystals.* NEHU.

14. Lakshminarayana, Donepudi. *Studies on ternary thin films of* $AgSbTe_2$ *and* $AgSbSe_2$. SPU, Vallabh Vidyanagar.

15. Maiti, Chittaranjan. *Studies on the dynamics of layer crystals.* U. Calcutta.

16. Patil, Nalini Nema. *A study of heart rate variability technique and its application to detect chronic foetal distress.* U. Poona.

17. Porwal, Nandlal. *Dielectric investigation of some compound semi-conductors at low-high and micro-wave frequencies.* RDV, Jabalpur.

18. Saha, Swapankumar. *Studies on the ionospheric radio wave propagation characteristics of standard frequency signals in the h.f. band at Calcutta.* U. Calcutta.

19. Sharma, Ami Chand. *Dielectric properties on semi conductors.* U. Roorkee.

20. Singh, Rama Janma. *Characterization and generation of states at the* $Si\text{-}SiO_2$ *interface.* BHU, Varanasi.

Chemistry

1. Arya, R.S. *Studies on the metal complexes of anilic acids.* U. Roorkee.

2. Bandyopadhyay, Pinaki. *Studies on the chemistry of palladium.* U. Calcutta.

3. Bandyopadhyay, Saumitra. *Studies on the constituents of Aristolochiaceae species.* U. Calcutta.

4. Bansal, Amla. *Physico-chemical studies of inorganic colloidal precipitates.* U. Roorkee.

5. Basu Baul, Tusharshubhra. *Multinuclear organotin complexes of polyfunctional ligand.* NBU, Rajarammohunpur.

6. Borade, Ramesh B. *Synthesis and characterization of Zsm-5 zeolites.* U. Poona.

7. Datta, Samirkanti. *Studies on metal complexes and metalloproteins.* U. Calcutta

8. Desai, Jagdishchandra Amrutlal. *Synthesis and study of 4-quinazolinone dyes.* SPU, Vallabh Vidyanagar.

9. Gangudi, Prakash Babu. *Reactions of aromatic hydrocarbons over Zsm-5 zeolites.* U. Poona.

10. Karna, Sashi Ranjan Prasad. *Ab initio Mo calculations of ESR hyperfine couplings.* BHU, Varanasi.

11. Khanapure, Subhash P. *Synthetic studies on aromatic steroids.* U. Poona.

12. Kittur, Mohammad-Iqbal Hatailsha. *Studies in the liquid field.* Kar U. Dharwad.

13. Kolhe, Vinayak Chavdas. *Studies on transition metal complexes of some bidenalate hydroxyquinone derivatives as models for biological electron transfer reactions.* U. Poona.

14. Maheshvari, J.M. *Studies on potential antimicrobial compounds.* Bhavnagar U.

15. Mallick, Asim Kumar. *Studies on biocidal properties of some organotin coordination compounds: Fungicidal and phytotoxic properties.* NBU, Rajarammohunpur.

16. Mukhopadhyay, Prabirkumar. *Studies on plant products.* U. Calcutta

17. Pathan, M.D. *Studies on some compounds of medicinal interest.* Bhavnagar U.

18. Phadtare, Shashikant Krishnaji. *Studies in synthesis of nitrogen heterocycles, amino acids and peptides.* U. Poona.

19. Prem Lata. *Experimental and theoretical studies on the electronic spectra of some disubstituted benzenes* Pb. U. Chandigarh.

20. Rastogi, Manju. *Mechanism of oxidation of organic compounds.* RDV, Jabalpur.

21. Ravi Kumar. V. *Studies in gas-solid catalytic reactions.* U. Poona.

22. Rawat, P.S. *Effect of trace microelements on biochemistry of vegetables of Kumaun Hills.* Kum. U. Nainital.

23. Sen, Bijoy Krishna. *Studies on saturated molecular systems using bond orbital approach.* NBU, Rajarammohunpur.

24. Shabih Ahmad. *Corrosion of austenitic stainless steels in polithinic acid.* U. Roorkee.

25. Sharma, Anita. *Physico-chemical studies of metal complexes of sulphophthalein dyes.* U. Roorkee.

26. Singhal, Neeta. *Therapeutics in quinazoline series.* Pb. U., Chandigarh.

27. Subramanian, Lakshmi M. *Studies in cyanoethylation.* U. Jammu.

28. Vinod Kumar. *Molecular interactions in mixtures of low molecular weight species.* MDU, Rohtak.

Earth Sciences

1. Chandra, Prabhat Chandra. *Geoelectrical studies for aquifer delineation in lower Maner basin of Andhra Pradesh and the Ganges-Tons interstream area of Uttar Pradesh.* BHU, Varanasi.

2. Gupta, Om Prakash. *Some studies on analog and numerical modelling in electromagnetic prospecting.* BHU, Varanasi.

3. Khare, Madhumas Chandra. *Sedimentological and hydrological studies* of part of Durg and Raipur Districts, M.P., India. U. Roorkee.

4. Rajamanickam, G. Victor. *Geological investigations of off-shore heavy mineral placers off Konkan Coast, Maharashtra, India.* ISM, Dhanbad.

5. Sharma, R.N. *Geochemistry and genesis of the copper sulphide deposit of Malanskhand, District Balaghat, M.P.* U. Roorkee.

6. Singh, S.P. *Palaeogeography and sedimentation history of the Delhi supergroup: A study from the Bayona sub-basin, North Eastern Rajasthan.* U. Raj, Jaipur.

7. Singh, V.N. *Ground motions due to buried sources.* U. Roorkee.

Engineering & Technology

1. Agarwal, V.C. *Studies on the characterisation of the meandering streams.* U. Roorkee.

2. Amit Bhadra. *Analysis of multireactor degradation of solid substrates into acids and methane.* IIT, Delhi.

3. Asawa, Girdhari Lal. *An experimental investigation of radial turbulent flow between parallel plates.* U. Roorkee.

4. Bagchi, A.K. *Snow melt runoff in Beas basin using satellite image.* U. Roorkee.

5. Chara, A.M. *Optimal sequencing and operating policies of multipurpose multireservoir basin projects.* U. Roorkee.

6. Chauhan, R.L. *A simulation study of tunnel excavation.* U. Roorkee.

7. Das, Mrinmoy. *Long-term behaviour of reinforced concrete portal frames under cyclic thermal loading.* IIT, Delhi.

8. Grover, Dinesh. *On modern approaches towards the design aspects of the central processor unit.* U Roorkee.

9. Jain, J.K. *Secondary effects in cable roofs.* U Roorkee.

10. Jain, Nitin Kumar. *Thyristor control of slipring induction motors.* IIT, Delhi.

11. Jayakumar, N.S. *A study of kinetics and dynamics of hydrolysis of acetic anhydride in batch and continuous flow stirred tank reactors.* IIT, Delhi.

12. Kundu, Subir. *Microbial conversion of cellulose to ethanol.* IIT, Delhi.

13. Nandi, Paresnath, *Catalytic hydrodesulfurisation of petroleum fractions.* U. Calcutta.

14. Rao, M.V.V. *A 2-D study of dispersion of pollutants through porous media.* U. Roorkee.

15. Samraj, Kingston S. *Static and dynamic analysis of gravity in dams on faulted foundations.* IIT, Delhi.

16. Setty, K.R.N. *Design analysis and characterization of flexible pavements.* U. Roorkee.

17. Shamsuddin Ahmad. *Analysis of chopper control D.C. motor drives including effects of some mechanical factors.* U. Roorkee.

18. Sharda, Nalin Kant. *Microprocessor control of three-phase cycloconverter: Investigations on design, implementation and performance.* IIT, Delhi.

19. Shihorwala, T.A. *Re-use of tertiary treated domestic sewage in Bombay for industrial water supply.* Devi Ahilya, Indore.

20. Singh, S.S. *Studies in Mn-Cr-Cu wear resistant white cast irons.* U. Roorkee.

21. Singh, Shailendra Kumar. *Coprecipitation of base metals with hydrous Fe and Mn oxides, their properties and application to pollution control.* JNU, Delhi.

CLASSIFIED ADVERTISEMENTS

BANARAS HINDU UNIVERSITY

(Advertisement No. 10/1983-84)

Applications are invited for the undermentioned posts. The benefit of Provident Fund/Pension, Dearness Allowance, House Rent Allowance and City Compensatory Allowance are admissible according to University Rules. The retirement age of University Employees is 60 years. The appointment will be made on one year probation. Higher starting salary within the grade is admissible to specially qualified and experienced candidates.

Applications will be entertained on the prescribed form duly supported with a Bank Draft or Crossed Indian Postal Orders of Rs. 7.50 (of Rs. 2.00 for the candidates belonging to Scheduled Caste/Scheduled Tribes) in favour of the Registrar, Banaras Hindu University towards application fee. Application forms will be supplied free of cost by the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi -221005 on receipt of Rs. 0.90 paise stamped self-addressed envelope of 23 cm×10cm size. Candidates called for interview for these posts will be paid actual Railway fare by the second class plus reservation charges for sleeper, if paid, and/or actual Bus fare from the present residence bothways by the shortest route as per University rules. No other expenses will be paid.

Applications for each post be sent separately alongwith attested copies of certificates in support of the qualifications and experience mentioned in the application and be addressed to the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221005.

Incomplete application in any respect will not be entertained for consideration.

Those who are in service should apply through proper channel. M.O. or Cheque will not be accepted towards application fee.

Reservation : A reservation of 15% in the case of Scheduled Castes and 7½% in the case of Scheduled Tribes will be made in the category of teaching posts upto the level of lecturers only.

The last date for receipt of application in the Office of the Registrar (Selection Committee Section), Banaras Hindu University either by post or by hand will be **15th February, 1984.** No applications shall be entertained after the last date from external, in-service employees and the candidates residing abroad.

Note

1. Number of vacancies are tantative and can vary according to needs.
2. Panel may be drawn for temporary appointment of Lecturers against the future vacancies.

INSTITUTE OF AGRICULTURAL SCIENCES

Grade

Professor : Rs. 1500-60-1800-100-2000-125/2-2500.

Reader : Rs. 1200-50-1300-60-1900.

Lecturer : Rs. 700-40-1100-50-1600.

All India Coordinated Research Project for Dryland Agriculture

1. **Professor-cum-Chief Scientist** (Agronomy/Soil Science/Agric-Engg./Genetics & Plant Breeding) (One)

Qualifications

Essential: An eminent scholar with published work of high quality, actively engaged in research. About ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Desirable: Ability to provide leadership to multi-disciplinary research project with particular reference to Dryland Agriculture.

2. **Reader-cum-Agronomist** (Agronomy) (One)

3. **Reader-cum-Soil Physicist** (Soil Science/Soil Science & Agric. Chemistry/Soil Physics) (One)

4. **Reader-cum-Agricultural Engineer** (Agricultural Engineering) (One)

5. **Reader-cum-Plant Breeder** (Genetics & Plant Breeding) (One)

All India Coordinated Agronomic Research Project

6. **Reader-cum-Agronomist** (Agronomy) (One)

All India Coordinated Pulse Improvement Project

7. **Reader-cum-Agronomist** (One)
8. **Reader-cum-Plant Pathologist** (One)
9. **Reader-cum-Entomologist** (One)
10. **Reader-cum-Microbiologist** (One)

All India Coordinated Wheat Improvement Project

11. **Reader-cum-Wheat Breeder** (One)

All India Coordinated Maize Improvement Project

12. **Reader-cum-Sr. Maize Breeder** (One)

All India Coordinated Project on Biological Mitrogen Fixation

13. **Reader-cum-Geneticist** (Two)

Qualifications (for all the above posts of Readers)

Essential: Good academic record with a Doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years experience of teaching and/or research provided that atleast three of these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with coutstanding record of teaching/research.

Desirable

1. (for the posts from item No. 2 to 5)

(a) Research experience on Dryland Agriculture as evidenced by published work/applied contribution.

(b) Ability to formulate and conduct research in respective field of Dryland Agriculture.

(c) Knowledge of experimental designs and modern methods of experimentation.

2. (for the post at item No. 6 only)

(a) Research experience in Agronomy as evidenced by published work/applied contribution.

(b) Ability to formulate and conduct research in the field of Agronomy.

(c) Knowledge of experimental designs and modern methods of experimentation.

3. (for the posts from item No. 7 to 10 only)

(a) Research experience on pulse crops as evidenced by published work/applied contribution.

(b) Ability to formulate and conduct research in respective fields or pulse crops.

(c) Knowledge of experimental designs and modern methods of experimentation.

4. (for the post at item No. 11 only)

(a) Research experience in wheat improvement as evidenced by published work/applied contribution.

(b) Ability to formulate and conduct research in wheat improvement.

(c) Knowledge of experimental designs and modern methods of experimentation.

5. (for post at item No. 12 only)

(1) Research experience in maize improvement as evidenced by published work/applied contribution.

(2) Ability to formulate and conduct research in maize improvement.

(3) Knowledge of experimental designs and modern methods of experimentation.

6. (for the post at item No. 13 only)

(a) Research experience in Microbial Genetics/Genetics of Nitrogen Fixation.

(b) Ability to formulate and conduct research in biological nitrogen fixation.

(c) Knowledge of experimental designs and modern methods of experimentation.

Note

1. **For post at item No. 10:** Doctorate Degree in Microbiology or Botany/Plant Pathology with specialisation in Microbiology.
2. **For post at item No. 13 :** Master and Doctorate Degree in Genetics and Plant Breeding/Agricultural Botany/Botany with specialisation in Microbial Genetics.

Explanation

For determining "good academic record" the following criteria shall be adopted:

(i) A candidate holding a Ph.D. Degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D degree should possess a high second class Master's degree and second class in Bachelor's degree; or

(iii) A candidate not possessing Ph.D degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

All India Coordinated Research Project for Dryland Agriculture

14. Lecturer-cum-Junior Scientist (Agronomy) (One).

15. Lecturer - cum - Junior Scientist (Soil Science): (Soil Science/Soil Science and Agric. Chemistry/Soil Physics) (One).

16. Lecturer-Cum-Junior Scientist (Agril. Engg.) (One).

17. Lecturer-Cum-Junior Scientist (Pl. Breeding) : (Genetics & Pl. Breeding) (One).

18. Lecturer - Cum - Junior Scientist (Agril. Meteorology) (One) (Geophysics with specialisation in Agric. Meteorology/Agril. Meteorology/Agronomy with specialisation in Agric. Meteorology).

19. Lecturer-Cum-Junior Scientist (Demonstration) : (One) (Agronomy/Extension).

All India Barley Improvement Project

20. Lecturer-Cum-Junior Breeder (Genetics & Pl. Breeding) : (One).

21. Lecturer-Cum-Junior Agronomist (Agronomy) : (One).

All India Coordinated Pulse Improvement Project

22. Lecturer-Cum-Junior Scientist (Breeding) (Six).

23. Lecturer-Cum-Junior Scientist (Microbiology) : (One).

24. Lecturer-Cum-Junior Scientist (Entomology) : (One).

25. Lecturer-Cum-Junior Scientist (Plant Pathology) : (One).

26. Lecturer-Cum-Junior Scientist (Agronomy) : (One).

27. Lecturer-Cum-Junior Statistician (One).

All India Coordinated Wheat Improvement Project

28. Lecturer-Cum-Junior Scientist (Breeding) (One).

All India Coordinated Maize Improvement Project

29. Lecturer-Cum-Junior Scientist (Breeding) : (One).

30. Lecturer-Cum-Assistant Maize Agronomist (One).

31. Lecturer-Cum-Junior Scientist (Agronomy) : (One).

All India Coordinated Rice Improvement Project

32. Lecturer-Cum-Junior Rice Breeder : (One).

All India Coordinated Oilseed Improvement Project

33. Lecturer-Cum-Junior Breeder (Safflower) : (One).

34. Lecturer-Cum-Junior Scientist (Breeding) (One).

35. Lecturer-Cum-Junior Scientist (Agronomy) (One).

Breeder Seed Production for National Seed Project

36. Lecturer-Cum-Assistant Breeder (Seeds): (One).

Qualifications (for all the above, posts of Lecturers except the post of Lecturer at item No. 16).

Essential

(a) A Doctorate's degree or research work of an equally high standard; and

(b) Good academic record with atleast second class (C in the seven point scale) Master's Degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Desirable

1. **For the posts from item No. 14 to 19 :** Adequate Research experience in the field of specialisation with special reference to Dryland Agriculture.
2. **For the posts at item Nos. 20 and 21:** Adequate research experience in the field of specialisation with special reference to Barley Improvement.
3. **For the posts from item No. 22 to 27 :** Adequate research experience in the field of specialisation with special reference to pulse crops.
4. **For the posts at item No. 28 :** Adequate research experience in the field of wheat breeding.
5. **For the posts from item No. 29 to 31 :** Adequate research experience in the field of specialisation with special reference to maize crop.
6. **For the post at item No. 32 :** Adequate research experience in the field of rice breeding.
7. **For the posts from item No. 33 to 35 :** Adequate research experience in the field of specialisation with special reference to safflower crop.
8. **For the post at item No. 36 :** Adequate research experience in the field of specialisation.

Having regard to the need for developing inter-disciplinary programme, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's Degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M. Phil. or equivalent degree or research work of quality) may be appointed provided he has done research work for altleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increment until he fulfils these requirements.

Explanation

For determining "good academic record" the following criteria shall be adopted:

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

2. Persons having secured marks more than the mid-point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a University shall be deemed to have passed that examination in the high second class.

Note

1. **For posts at item Nos. 22, 28, 29, 32 to 36 :** Master's Degree in Genetics and Plant Breeding/Agricultural Botany/Botany with specialisation in Genetics & Plant Breeding.
2. **For post at item No. 23 :** Doctorate and Master's Degree in Microbiology or Botany/Plant Pathology with specialisation in Microbiology.
3. **For post at item No. 27:** Doctorate and Master's Degree in Statistics/Agricultural Statistics.

Qualifications (for the post of Lecturer at item No. 16 only).

Essential

(1) Master's Degree in appropriate field in Engineering/Technology.

(2) Consistently good academic record with a Bachelor's degree in Engg./Technology. First Class at Bachelor's degree and/or Master's degree level.

(3) One year's relevant professional experience outside academic/research institutions.

Having regard to the requirements of emerging fields of Engineering and of developing inter-disciplinary programmes, the requirements of a postgraduate degree in Engg./Technology may be waived in the cases of otherwise well qualified candidates.

Provided further that if a candidate does not possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of 5 years of his appointment failing which he will not be able to earn future increments until he fulfils this requirement.

Provided still further that in case the candidates with M.Tech./M.E. qualifications are not found suitable for appointment, first class Engineering Graduates may be appointed subject to the condition that the candidates concerned shall have to obtain M. Tech./M.E. Degree within a period of 5 years failing which they shall not be confirmed and shall not be entitled for drawing further increments and till then they shall not teach the higher classes.

SCHOOL OF PLANNING AND ARCHITECTURE

NEW DELHI-2

(Deemed to be a University under Section 3 of the U.G.C. Act)

Applications are invited from Indian Nationals for the following post:

Deputy Registrar (One—reserved for Scheduled Castes)

Scale of Pay : Rs. 1100-50-1600.

Qualifications

(a) **Essential**

(i) Bachelor's Degree, at least, Second Class of a recognised university or equivalent.

(ii) At least, seven years' experience of administration with abilities to control, guide and supervise executive staff at the level of the Assistant Registrar or equivalent post in the pay-scale of Rs. 700-40-900-EB-40-1100-50-1300, in a Government or Semi-Government Department/Autonomous Organisation, dealing with Education/University or Educational/Research/Cultural Institution of Higher Learning.

(iii) Adequate experience in Financial Management work/Examination work; knowledge of Government rules and regulations.

(b) **Desirable**

(i) Master's Degree of a recognised University/Bachelor's Degree of a recognised university in Law.

(ii) Proficiency in conducting meetings of Committees and Conferences.

(iii) Abilities to adopt Government Rules, Regulations and Procedures, in a flexible manner, to the growing requirements of a public educational institution.

Age limit : Below 50 years for Scheduled Castes candidates.

The post carries the benefits of G.P. Fund-cum-Gratuity - cum-Pension/C.P. Fund-cum-Gratuity on confirmation and Central Govt. Health Scheme services on appointment. The period of probation is of one year. Allowances are as admissible to comparable posts in the Government of India except House Rent Allowance which is 20% of the basic pay.

Prescribed Form of Application may be obtained from the Office of the School, on working days between 9.00 A.M. and 5.00 P.M. except Saturdays and Sundays. Applications on prescribed form, accompanied by attested copies of certificates and testimonials and a crossed Indian Postal Order of Rs. 1.25 p drawn in favour of 'SCHOOL OF PLANNING AND ARCHITECHTURE, NEW DELHI-2', should reach the Registrar, School of and Architecture, I.P. Estate, New Delhi-110002 by **6th February, 1984.**

Request for the application forms must specify the name of the post and be accompanied by a self-addressed unstamped envelope of 25cm x 12cm size.

Candidates from outside Delhi called for interview will be paid II Class rail fare for both the journeys (within India).

Applicants who are in the employment of Government/Semi-Government Organisations or of any Government undertaking must send their applications through proper channel.

—MMG-515-DLI—

UNIVERSITY OF ROORKEE

ROORKEE

No. EST(A)/1283/A-86 (Advt.) 83
Dated : Jan. 3, 1984

Corrigendum

In the Advertisement No. 1/9/83-A-86 (Advt). dated 1-9-1983 the nature of the post of PROFESSOR, W.R.D.T.C. be read as ONE REGULAR & TWO TEMPORARY.

O.N. Chaturvedi
REGISTRAR

THE UNIVERSITY OF KASHMIR

SRINAGAR

Advertisement Notice

Applications are invited for the following posts:-

Professor in Political Science;
Reader in Commerce, History and Regional Geography;
Lecturer in Botany, Economics, Mongolian Studies and Sociology/Social Anthropology.

The prescribed application forms can be had from the University Office on cash payment of Rs. 15/- or by sending a crossed postal order drawn in favour of the Registrar, cashable at Srinagar post office alongwith a self-addressed envelope (5"×11") with the necessary postage. An application fee of Rs. 5/- is also payable which may likewise be remitted through Postal Order.

The posts carry the pay scales as prescribed by the University Grants Commission.

The last date for receipt of applications is **February 6, 1984.**

Candidates are advised in their own interest to send their detailed curriculum vitae in advance.

Details in respect of qualifications etc. prescribed for the posts can be had from this office.

Peerzada Ghulam Hassan
SPECIAL OFFICER (Admn.)

HARYANA AGRICULTURAL UNIVERSITY

Advertisement No. 9/83

Applications invited for following posts. Higher start outstanding qualifications, experience and achievements. Benefits of Contributory Provident Fund and leave etc. according to University Rules. Applications of the candidates already in service must reach through proper channel upto the fixed date. Applications on prescribed form (obtainable free by sending self-addressed unstamped envelope size 23 x 10 cms. to Assistant Registrar (F), HAU, Hissar) accompanied by prescribed fee of Rs. 10/- in the form of crossed Postal Order in the name of Assistant Registrar (G), HAU, Hissar payable at HAU Post Office, Hissar, should reach Registrar by **8-2-1984** (**23-2-1984** for candidates residing abroad). The applications received after the prescribed date will be rejected. The applicants must possess prescribed qualifications and experience on the last date for receipt of applications. However, those who have submitted their thesis (M.Sc. Ph.D.) are also eligible to apply by the last date of receipt of applications. They will be considered by the Selection Committee only if they produce the completion certificate of M.Sc./Ph.D. degree at the time of interview. The envelope containing application must be superscribed as "APPLICATION FORM FOR THE POST OF ——————."

1. **Professor of Chemistry : (One) Essential** : (i) Second class B.Sc. (ii) Second class M.Sc. in Chemistry. (iii) Ph.D. in Chemistry with specialisation in Inorganic, Organic or Physical Chemistry, (iv) Ten years experience of Research/Teaching out of which at least five years should be as Associate Professor or equivalent rank. **Desirable** : (i) Practical experience of applications of Chemistry in Crop Improvement as evidenced by published work. (ii) Organisational/Administrative capabilities and experience.

2. **Assistant Professor (Home Management) : (One)** : (i) Second class B.Sc. in Home Science, (ii) Master's degree in the first class or with an OGPA of not less than 3.2/4.00 or equivalent in the discipline of Home Management/ Family Resource Management OR Second class Master's degree followed by Ph.D. in the discipline of Home Management/Family Resource Management.

3. **District Extension Specialist (Farm Management) : (One)** : (i) Atleast second class B.Sc. (Agri.). (ii) Master's degree in the first class or with an OGPA of not less than 3.2/4.00 or equivalent in the Agril. Economics with specialisation in Farm Management OR atleast second class Master's degree followed by Ph.D. in Agri. Economics with specialisation in Farm Management.

4. **Assistant Professor (Animal Breeding) : (One)** : (i) At least second class B.V.Sc. & A.H., B.Sc. Dairying, B.Sc. Animal Science, B.Sc. Agri. (with elective in Animal Science). (ii) Master's degree in the first class or with an OGPA of not less than 3.2/4.00 or equivalent in the discipline of Animal Breeding OR at least second class Master's degree followed by Ph.D. in Animal Breeding.

Note:
1. For post at Sr. No. 1 one or more qualifications relaxable in case of candidates found otherwise outstanding.
2. For post at Sr. No. 1, the minimum experience of 10 years (including 5 years as an Associate Professor) is required. The above experience will be counted after a candidate obtains his M.Sc. degree. Further a period of minimum 3 years towards obtaining Ph.D. degree, shall be excluded from the experience.
3. Special weightage will be given to extension experience possessed by the candidates for posts in disciplines amenable to extension.
4. For posts at Sr. No. 2, 3 & 4, persons who do not possess Ph.D. at the time of their selection, if appointed, shall not be allowed to cross the stage of Rs. 1300/- in the scale of Rs. 700-40-1100-50-1600, till they complete their Ph.D.
5. No. of vacancies mentioned against each post may vary.
6. For all posts, reservation for different categories will be as per Haryana Government Rules.

Pay Scales

Sr. No. of post	Pay Scale	Total emoluments at the initial of the pay scale (exclusive of House Rent)
1.	Rs. 1500-60-1800-100-2000-125/2-2500.	Rs. 2570/-.
2 to 4	Rs. 700-40-1100-50-1600.	Rs. 1507/-

REGISTRAR

BHOPAL UNIVERSITY, BHOPAL

ADVERTISEMENT-ESTT.-/83

Applications in the prescribed proforma obtainable by sending a self addressed envelop of 24x12 cm size bearing stamps worth 00.50 paise are invited for the following posts in the Department of National Adult Education & Extension Programme, Bhopal University and in the pay scales mentioned against each with the benefit of allowances as admissible under the University rules so as to reach the undersigned on or before **31-1-1984.**

Post	No. of Posts	Pay Scale	Relevant subject in which Masters Degree is reqd.	Specialisation
Coordinator N.A.E.P.	One	1100-50-1600	Social Sciences/ Social Work/ Adult Education	Adult Education & Continuing Education.
Project Officer	One	700-40-900-EB-40-1100-50-1300	-do-	-do-

Qualification & Experience

For the Post of Coordinator NAEP
1. A First or Second Class Master's Degree of an Indian University or an equivalent qualification of a foreign University in Social Sciences/Social Work/Adult Edn. A person with doctorate in any of these areas will be preferred.
2. Good Academic Record with doctoral degree or an equivalent published work and five years teaching/ research experience.
3. Experience of research, teaching and/or field work of at least two years duration will be preferable.

For the Post of Project Officer NAEP
1. A first or second class Master's degree in Social Sciences/Social Work/Adult Education of an Indian University or an equivalent qualification of a foreign University with good academic record with doctoral degree in any of the areas mentioned above.
2. Two years experience in community work/field work.

Age : The age for the above posts should not be more than 35 years as on **31-1-1984**. For S/C and S/T candidates 40 years.

Application Fee

For the post of Coordinator NAEP Rs. 15/-.

For the post of Project Officer NAEP Rs. 10/-.

Candidates called for interview will be required to travel at their own expenses.

Persons in service must apply through proper channel and should produce N.O.C. if called for interview.

N.B.
1. Good Academic Record will be determined as per U.G.C. guidelines for teaching posts.
2. Posts are purely temporary and shall continue only up to the period U.G.C. Scheme & Financial Assistance continues.

Dr. B.L. Sharma
REGISTRAR

NORTH-EASTERN HILL UNIVERSITY

LOWER LACHUMEIRE
SHILLONG-793001

Application on plain paper are invited from Indian citizens for teaching (Professor—Pro, Reader—Re, Lecturer—Le) and non-teaching posts in different Departments and Centres of the University in its Campuses at Shillong (S), Kohima (K) and Medziphema (M), in Nagaland and Aizawl (A) in Mizoram, indicating name, address, date of birth, details of academic qualifications giving the divisions and percentage of marks at each stage beginning High School, teaching and research experience with details of institution, classes taught, areas of specialisation, full particulars of publications, certificates, testimonials, etc. and no objection from employer.

The specialisation are mentioned at the end of each section. In case no mention is made for any post, it is open for all specialisation in that subject. Our College of Agriculture will have B.A./S.Sc. classes also besides B.Sc. (Agri) with appropriate departments in Science and Humanities.

The applications accompanied by Indian Postal Order of Rs. 10.00 (Rs. 2.50 for ST/SC) payable to NEHU, Shillong should reach the undersigned on or before **6th Feb. 1984**.

The posts carry the usual UGC pay scale plus substantial special benefits, in the form of special pay, etc. The approximate emoluments per month at the minimum of the scale of those posted at Shillong will be Pro: Rs. 2455/-, Rs. 2217/-- and Le: Rs. 1436/- and for those posted in Kohima and Aizawl—Pro: Rs. 2600/- Re: Rs. 2400/- and Le: Rs. 1700/- plus a free house. Advance increments in the form of personal pay may be given depending on qualifications and experience. Candidates called for interview will be paid TA as per University Rules. Those selected will be eligible for joining TA.

20% of the posts of Lecturers reserved for SC/ST candidates who will be given preference other things being equal.

1. School of Physical Sciences. Life Sciences and Environmental Sciences

Electronics	—	Re 1
Physics	—	Pro 1, Le 1
Statistics	—	Pro 1, Re 1, Le 1
Chemistry	—	Re 1, Le 1
Bio-Chemistry	—	Pro 1, Re 1, Le 1
Zoology	—	Re 1
Geography	—	Pro 1, Le 1
Geology	—	Le 1 (K)

For Lecturers post see also our College Section below.

Specialisation : Electronics — Any branch of electronics preferably Instrumentation Technology. **Physics**—Pro: Nuclear Physics Theory. Le: Nuclear physics experimental. **Chemistry**—Any branch of Organic Chemistry. Zoology—Environmental Biology/Ecology. Others—Any branch.

2. School of Social Sciences, Language and Education

Anthropology	—	Pro 1, Le 1
Sociology	—	Le 1
Education	—	Pro 3, (K1, A1, S1)
	—	Re 4 (A2, K2)
	—	Le 3 (S1, K1, A1)
Philosophy	—	Re 1
Economics	—	Pro 1 (A), Re 4 (S2, A2)
Commerce (K)	—	Pro 1, Re 2, Le 1
History		Re 1, Le 1
Public Administration (A)	—	Pro 1, Re 3, Le 1
English	—	Pro 1(A), 1(K), Re 4 (A2, K2)
Linguistics	—	Pro 1(K), Re 1(K), Le 1(K)
Khasi	—	Re 1, Le 1
Psychology	—	Re 1, Le 1

For Lecturers posts see our College Section below.

Specialisation : Anthropology — Cultural Anthropology. **Economics** — Micro/Macro Economics Theory 1 Rural Development **Re (S)** Economic Theory/Classical Political Economy/Planning and Policy/Quantitative Economics/Public Economics **Re(A)** Rural Development / International Trade / Economic Planning. **History**—Medieval Indian History/Non-Indian/ Modern Indian, History. **Philosophy**—Indian—**Philosophy.** Commerce—Re/Le Cost and management Accounting: Income Tax Law and Practice : Banking and Financial Management: Public Enterprise Management. **Khasi**—Comparative literature. **English**—Re. (S1, A1) Linguistics, other open.

3. Centre:

Education Technology (A) Re : 2.

Continuing Education (S) Re : 2.

Rural Development : Rural Development (M) Pro/Re. 2.

Creative Arts : Re/Le : 3.

School Mathematics and Science (S): Pro/Re : 3.

Note : The level of positions in Pro/Re/Le will depend on suitability of the candidates.

Specialisation : *Education Technology*—Preferably use of Mass media for one post. *Continuing Education*—Distance Education/Use of Mass Communication Media in Education. *Rural Development*—Any of the Social Sciences with experiences in Rural Development/ Agriculture with Extension or Rural Development. *Creative Arts*—Music/Performing Arts/Dramatics Paintings with distinct Sciences and Humanities stream. *School Mathematics and Science*—Interest and work in School Mathematics or Science (Physical or Biological).

4. **Colleges**

(a) **College of Agriculture, Medziphema, Nagaland.**

Pro: Agronomy (1), Soil Conservation (1)
Re: Statistics 1.

Le : Agronomy, Plant Pathology, Mathematics, Statistics, Physics, Chemistry, Zoology, Botany, English, Sociology, Economics (One each).

Specialisation : Statistics—Re: Geometric design of experiments. Plant Pathology—Le: Field Crops.

(b) **Pachhunga University College (Aizawl** : (Upto Honour level).

Le : Forestry—1, Physics—1.

Qualification

Pro: **Essential :** An outstanding scholar with established reputation and significant contribution to the subject.

OR

(i) Doctorate in the subject or equivalent.

(ii) Ten years teaching experience of post graduate classes or fifteen years teaching experience including five years of post graduate classes or ten years Post Doctoral Research experience and guidance.

Readers: Essential

(i) Doctorate in the subject (any subject for Continuing Education) OR equivalent.

(ii) Five years teaching experience with at least three years of post graduate classes. Seven years with five years honours classes. OR five years post doctoral research work for Continuing Education equivalent work in Continuing Education.

Lecturers: Essential

(i) Consistently good academic record with first or High Second class Master's degree in the relevant subject.

(ii) Doctoral Degree or equivalent.

OR

M. Phil with at least a second class Master's Degree. Candidates not holding an M. Phil degree and having atleast a second class Master's Degree and a first class for general and second class for SC/ST candidates Degree (BA/B.Sc./B.Com.) may also be considered if suitable candidates are not available. They may be offered Research Associateship with stipulation to acquire M.Phil/Ph.D. within Three/Five years.

Mrs. M.R. Mawlong
REGISTRAR

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University News

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Food Science & Technology
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C.F.T.R.I., MYSORE

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- AIU Delegation Meets Eighth Finance Commission
- Educational Ideas of Grundtvig and Gandhi
- Silver Jubilee Celebrations of Gorakhpur University
- Infra-Red Communication System
- Project Method for UG Students

CLASSIFIED ADVERTISEMENTS

ALIGARH MUSLIM UNIVERSITY
ALIGARH

Advertisement No. 29/83-84

Applications on the prescribed forms are invited for the following posts.

1. **Lecturers in Medicine, Department of Medicine.** Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications : M.D. (Medicine)/ M.D. (General Medicine).

Teaching/Research Experience : Requisite recognised postgraduate qualification in the subject.

2. **Lecturer in Anaesthesiology, Deparment of Ophthalmology :** Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications : I-Essential : M.D. (Anaesthesiology) M.S. (Anaesthesiology).

Teaching/Research Experience : Requisite postgraduate qualification in the subject.

II-Desirable : Aptitude of research and published papers.

3. **Lecturer in Physiology, Department of Physiology :** Scale of Pay: Rs. 700-40-1100-50-1600 plus allowances.

Qualifications : I-Essential : M.D. (Physiology) M.B.B.S. with M.Sc. (Physiology) Ph.D. (Medical Physiology) D.Sc. (Medical Physiology).

Teaching/Research Experience : Requisite recognised postgraduate qualification in the subject.

II-Desirable : Original research publications in the speciality in Indian and foreign journals.

4. **Lecturer in Preventive & Social Medicine, Department of Preventive & Social Medicine :** Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications

I-Essential : M.D. (Social & Preventive Medicine)/(Community Medicine), M.D. (Medicine) with D.P.H.

Teaching/Research Experience : Requisite recognised postgraduate qualification in the subject.

Desirable : Published research work in the speciality.

5. **Lecturer in Microbiology, Department of Microbiology:** Scale of Pay: Rs. 700-40-1100-50-1600 plus allowances.

Qualifications

I-Essential : M.D. (Bacteriology) M.D. (Microbiology) M.D. (Bacteriology with Pathology) M.D. (Pathology & Bacteriology) M.B.B.S. with M.Sc. (Medical Bacteriology) M.Sc. (Medical Microbiology) Ph.D. (Medical Bacteriology)/Ph.D. (Medical Microbiology)/ D.Sc. (Medical Bacteriology) D.Sc. (Medical Microbiology).

Teaching/Research Experience : Requisite recognised postgraduate qualification in the subject.

II-Desirable : Teaching experience in Microbiology.

6. **Lecturer in Anatomy (Histology) Department of Anatomy :** Scale of Pay: Rs. 700-40-1100-50-1600 plus allowances.

Qualifications

I-Essential : M.S. (Anatomy) M.B.B.S. with M.Sc. (Anatomy) Ph.D. (Medical Anatomy) D.Sc. (Medical Anatomy).

Teaching/Research Experience : Requisite recognised postgraduate qualification in the subject.

II-Desirable : Published work/research experience in the field of Histology.

7. **Principal, A.K. Tibbiya College:** Scale of Pay : Rs. 1500-60-1800-100-2000-125/2-2500 plus allowances.

Qualifications

I-Essential : (1) A degree in Unani Medicine from a University established by law or a statutory Board/Faculty/ Examining body of Indian Medicine or equivalent.

(2) Should have sufficient teaching experience as Reader.

II-Desirable : Administrative experience in a Tibbiya College.

Higher initial start may be given to candidates possessing exceptional qualifications and experience. Candidates interviewed may be paid contribution towards their T.A. equal to one single second class Railway fare only.

Prescribed application forms and instructions may be had from the Assistant Registrar (Selection Committees), Registrar's Office, A.M.U. on payment of lump sum amount of Rs. 5/- in cash (to be deposited in the Cash Section, Finance Office, A.M.U.) or through an Indian Postal Order payable to the Finance Officer, A.M.U. either personally or by sending a self-addressed stamped envelope of 23 cm x 10 cm. **Last date for receipt of applications is 10th February, 1984 (up to 4.00 P.M. only). Incomplete applications and those received late will not be considered.**

Note: Suitable persons may be kept on Panel for future Appointments.

Zamir Ahmed Khan
REGISTRAR

SARDAR PATEL UNIVERSITY
VALLABH VIDYANAGAR 388 120
GUJARAT

Notification No. EST/11 (1983-84)

Applications are invited in the prescribed forms available from the University Office on payment of Re. 1/- in cash or by Indian Postal Order for the following posts so as to reach the undersigned on or before **31-1-1984**:

1. Professor of Economics (Monetary Economics). Scale of Pay : Rs. 1500-60-1800-100-2000/125/2-2500.

2. Reader in Polymer Chemistry. Scale of Pay : Rs. 1200-50-1300-60-1600-Assessment-60-1900.

3. Reader in Hindi (2 Posts) (one with specialization in Linguistics and Stylistics and one in Drama and Dramaturgy). Scale of Pay : Rs. 1200-50-1300-60-1600-Assessment-60-1900.

4. Lecturer in Hindi. Scale of Pay : Rs. 700-40-1100-50-1300-Assessment-50-1600.

5. Lecturer in Computer Science (2 posts). Scale of Pay : Rs. 700-40-1100-50-1300-Assessment-50-1600.

6. Technician in Chemistry. Scale of Pay : Rs. 700-40-1020-EB-45-1200-50-1300-EB-50-1500.

7. Research Associate in Hindi. Scale of Pay : Rs. 1300-fixed.

Details of the prescribed qualifications, etc., will be supplied alongwith the application forms.

All the posts except at Sr. No. 7 carry benefits of Dearness Allowance, Provident Fund, Gratuity or Pension Scheme as per University rules.

Preference will be given to qualified candidates belonging to Scheduled Castes Scheduled Tribes, socially and educationally and/or economically backward classes.

R.C. Thakkar
REGISTRAR

CHAMPHAI COLLEGE
CHAMPHAI : MIZORAM

NOTICE

Applications are invited for three Posts of Lecturer in the Department of English (one post) and Education (two posts), Champhai College, Champhai, Mizoram, in the Pay Scale of Rs. 700-40-1300/- plus other allowances admissible under Government rules, and the total emolument at the initial stage is Rs. 1,744.50. Apply stating full particulars supported by attested copies of Marksheets and Certificates from Matriculation onwards to reach the undersigned on or before **10th Fabruary, 1984**. Each application must be accompanied by an applicaion fee of Rs. 10/- in the form of Indian Postal Order or State Bank of India Draft payable to the Principal, Champhai College, and also a recent passport size photo.

L.F. Sailo
PRINCIPAL

UNIVERSITY
NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :
M.S. RAMAMURTHY

7 FEB 1984
C.F.T.R.I., MYSOR

UGC's Central Universities Panel Report

In the last issue of University News a part of the summary of the main observations and recommendations contained in the UGC's Central Universities panel Report was given. Some highlights from the above part :

- Central Universities have to some extent pursued their academic objectives within resources available. However, strikes by students, karamcharis and in some cases even teachers have created a crisis. The leadership of the country, the intellectuals and the university community in particular, have to strain every nerve in order to bring the university system back to its creative role in our society.
- Two objectives atleast should have been kept in view by the Central Universities : an all-India character and pursuit of excellence in them. None of the Central Universities have been able to maintain an All-India character in the matter of admissions. Strong evidence of such inbreeding in recruitment at all levels was also found which vitiates pursuit of excellence.
- A set of objectives should be clearly provided to the Central Universities to serve as a constant guide to the development of their educational and research programmes and to provide a basis for judging their performance in future. The objectives could be :
    - The Central Universities, as institutions of national importance should endeavour to serve the purposes of human resource development and national advancement by providing a wide variety of educational programmes to suit the needs and aptitudes of the scholars with regard to the manpower needs of the country.
    - These universities will endeavour to raise the quality of scholarship by all possible means.
    - These universities will pursue excellence in the sphere of research.
    - A strategy has been suggested :
    - to limit admissions to a capacity which cannot be changed under day-to-day pressures;
    - to limit the duration for which a student may be allowed to study a course;
    - to make admissions according to merit for which Central Universities may conduct a suitable examination;
    - for the UGC/Government to provide opportunities for high quality education through distance education;
- The setting up of a national university of distance education.
- It is essential that the best talent having aptitude for and orientation towards teaching is recruited to the post of lecturer in order to avoid inbreeding.
- One of the factors which causes the situation arising out of student agitations to get worse is soft decisions on the part of administration when faced with trouble. The administrative inefficiency and tardiness which prevails in most of the universities is to an extent responsible for such unhealthy trends on the campus.

The Second part follows:

2.2 The agitations launched by the Karamcharis of the Central Universities relate to demands for (a) promotions (b) housing amenities, (c) medical facilities and (d) disparities in pay scale. In fact it has been observed that revision of scales of pay by one university leads to similar demands from other universities creating unrest.

2.3 It has been noted by the Committee that though by and large there have not been many instances of teachers creating unrest on their own, there were a few cases where they have directly disrupted university work which led to either paralysing the academic work on Campus or closure of the University. The main demands of the teachers are provision of promotional avenues, housing and medical facilities.

2.4 The Committee was deeply concerned with the question of discipline of students and ways and means of upholding it. The Committee has observed: "We regret to record that though the Acts/ Statutes/ Ordinances of the universities provide that Rules be framed regarding discipline and proper conduct of students, practically nothing effective has been done by the universities in this regard." The universities have been advised to frame rules, violation of which would amount to indiscipline; the suggestions in line with similar guidelines obtaining in such leading institutions as the London School of Economics.

No student of the University shall:

(a) Disrupt teaching, study, research or administrative work, or prevent any member of the university and its staff from carrying on his work, or do any act reasonably likely to cause such disruption or prevention.

(b) Damage or deface any property of the University or do any act reasonably likely to cause such damage or defacing; and

(c) Engage in any conduct which is, or is reasonably likely to be, clearly detrimental to the University's purposes.

It is also recommended that certain forms of agitation should be banned, for example gherao, camping inside the boundaries of houses of teachers or officers, use of derogatory and abusive slogans (some of the abuses hurled through high powered loudspeakers at university authorities and their families are obscene and unprintable) and propaganda to incite hatred and violence.

2.5 The Committee is of the view that the above recommendation regarding discipline should also be applicable to all members of the University Community i.e. Teachers and Karamcharis.

2.6 In case the Karamcharis or the Teachers resort to strike or suspend their duties, it is recommended to be provided by Statutes that such an action would make them liable to the non-payment of salary for the concerned period.

2.7 With regard to the role of the Courts dealing with the question of discipline both of students and teachers, the Committee has made the following observations :

> "Connected with the question of discipline, both of students and teachers, is the role of the law courts in relation to this aspect of university functioning. It has been represented to us, and we share the view, that in the relationship between students, teachers and the university, legal as well as moral issues are involved. The relation of students with teachers in the class room or the laboratory during field work and in the conduct of examinations is not just that of one citizen to another; its special features are obvious and it is necessary to promote an atmosphere conducive to learning by preserving the relationship of respect for the teacher and university authority on the one hand and utmost kindness and generosity towards the student on the other.
>
> In all disciplinary matters, therefore, it is felt that a judgement has to be based on the realities of the university situation. Nevertheless, it is often found that Court judgements allow admission of students, permit them to sit at examinations, where university's own Statutes or Ordinances expressly forbid it. Such an action on part of the Courts often becomes a cause of ruining discipline, refuelling agitations and adversely affects the studies of the vast majority of the students.
>
> We feel that in such matters the Court's intervention be as sparing and as sensitive to interests of the institution as possible. Therefore, one course of action seems to be that where a Court is to hear such academic or discipline cases against a University it be supported by a Jury of academics drawn perhaps from other universities.
>
> The other is the important question of writ litigation against universities by students or employees. A provision should be made that such litigation would not fall within the purview of the Civil Courts. We would suggest that the Government may consider the desirability of setting up special courts which could expeditiously hear such cases. Another suggestion would be for the Government to consider setting up administrative tribunals for such matters.
>
> It may also be added that the existing practice is not only time consuming for the Universities but the Courts take their own time to decide the cases. Such delays adversely affect the functioning of the universities. With the setting up of special courts justice will be done speedily and it would have a salutary effect on the working of the universities."

2.8 The Committee has recommended that a provision may be made in the Acts of the Universities to give statutory security of service to the teachers.

2.9 The duties and responsibilities of teachers, it is recommended, be provided through the Statutes of the universities, as these have not so far been laid down in clear terms. The Committee while agreeing that the teachers should have the fullest freedom of expression and of association, recommended guarding against irresponsible behaviour and actions detrimental to the duties to be performed. In this connection, the following are stated to be the duties of a teacher :

(a) He shall engage classes regularly and punctually and impart lessons so as to maintain and strengthen standards of academic excellence. His academic duties shall include guidance and instruction to students in the form of tutorials/seminars/practicals and assessment/examination/evaluation work assigned to him by competent authorities of the institution. He shall not ordinarily remain absent from work without prior permission or grant of leave.

(b) A teacher shall help the college/university authorities in enforcing and maintaining discipline among students.

(c) A teacher shall participate fully and enthusiastically in the corporate life of the institution and shall perform any other curricular and extra-curricular work related to the institution as may be assigned to him from time to time by the competent authorities of the college/university.

In this context the following shall be deemed to be unacceptable conduct on the part of the teacher:

(1) Failure to meet the responsibilities of instruction including (a) failure to meet classes, tutorials, practicals and seminars; (b) failure to be present in the institution/department during stipulated hours; (c) failure to hold examinations as scheduled and to invigilate at such examinations; (d) failure to assess impartially the performance of students; and (e) to indulge in over marking/under marking or other attempts at victimisation on any ground.

(2) Discrimination for or against students on political grounds or on grounds of caste, creed, sex, religion, nationality, region or language.

(3) Inciting students against other students, colleagues or administration, including making public statements and writing articles in newspapers and magazines, calculated to achieve this purpose.

(4) Refusal to carry out the decision of the appropriate administrative and academic bodies of the university/college.

(5) Unauthorised use of university/college resources or facilities for personal, commercial, political or religious purposes.

(6) Forcible detention, threats of physical harm to, harassment and or intimidation of another member of the college/university community, with the intention of interferring with that person's performance of his/her duties.

(7) Commission of a Criminal Act which has led to conviction in a Court of Law.

(8) Violation of the canons of intellectual honesty, such as misappropriation of the writings, research and findings of others.

(9) Being a full time employee, engaging in trade or business or tuitions without permission of employer.

The competent authorities of the university/college may frame comprehensive rules, indicate procedures of enquiry to be instituted against an erring teacher and ensure that principles of natural justice are fully observed and that the teacher's right of defence during the enquiry and of appeal against the penalty that may be imposed on him is fully guaranted. It may also be ensured that teachers' freedom of expression and legitimate professional or trade union activities do not become the real basis of disciplinary action.

2.10. The Committee has further suggested that when action, arising from breach of the above is to be envisaged, the final decision or award of punishment, may be recommended by a Committee of three academics who do not belong to the university concerned. The recommendations made by this committee should be binding on the university concerned.

3. Machinery to deal with and strengthen corporate life

3.1 The Committee is of the view that Central Universities have either no grievance removing machinery or an inadequate and ineffective machinery.

3.2 It has been recommended that the universities may appoint a person of very high credibility to examine individual grievances of students, teachers and Karamcharis, who would propose to the Vice-Chancellor how a grievance could be removed. The person to hold this high office should have held senior administrative, academic or legal positions and his appointment should be made by the Visitor from a Panel of names proposed by the Vice-Chancellor and term of office should be co-terminus with that of Vice-Chancellor.

3.3 As regards the general grievances of the employees, which may also include service conditions, the universities have been advised to set up Joint Consultative machinery separately for teachers and Karamcharis, on the same lines as in the Central Govt.

3.4 The grievances connected with terms and conditions of service which cannot be tackled at the level of individual universities without creating other problems would be handled through a new body; Council of Central Universities to be set up.

3.5 In the case of student grievances relating to residential matters, it has been suggested that these be tackled successively at hostel/hall levels through appropriate committees including students, wardens and provosts.

3.6 The Committee has observed that it did not find much sign of active corporate life among the students even in universities where a large number of students stay in residence on the campus.

3.7 The Committee has, therefore, recommended that adequate funds be provided to the Universities to (a) encourage sports and games; (b) support drama and film clubs, cultural activities, and hobby centres; (c) encourage institution of evening diploma courses in different technical, scientific and literary fields and (d) strengthen participation of students in adult and extension programme.

3.8 It has been recommended that not only should there be effective participation of students in the organisation of these activities through appropriate committees under the guidance of the teachers, but it may be ensured that all students participate in one or the other activity according to their aptitude.

4. Other measures for efficient academic and administrative functioning of universities

4.1 The Committee has observed that :

> "the teacher has a unique role in society. While being a part of the social environment around him, he is also an important agent for changing this environment and moulding it for achieving the aspiration of society and for upholding ethical and cultural values. A great responsibility rests on the teacher for moulding the future of a nation. This responsibility can be fulfilled only when academic atmosphere and discipline in the educational institutions are strengthened.
>
> If we have to achieve the above, it has also to be ensured that the teachers can work in a congenial atmosphere and are not over-burdened with looking after their day to day needs. During our discussion with teachers' representatives in all the Central Universities the following points emerged which affect the teachers directly :
>
> (1) Revision of scales of pay;
>
> (2) Promotional opportunities;
>
> (3) Provision of Housing and Medical Facilities;
>
> (4) Adequate facilities for Library."

4.2 The Committee noted that the UGC has since appointed a Committee to consider the question of revision of scales of pay of teachers and related matters.

[The next part of the Report will appear in the next issue]

AMERICAN STUDIES RESEARCH CENTRE

HYDERABAD - 500007

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A.I.U. Delegation Meets Eighth Finance Commission

The maintenance grants provided to the universities have been quite in adequate considering the range of their activities. Recently due to inflation and general escalation in prices, the situation has further worsened. The chemicals and other science laboratory equipments have shown an abnormal increase in price. Foreign books and journals have also registered considerable increase in their cost. Considering these facts, it was decided that a delegation of Vice-Chancellors should meet the Eighth Finance Commission and plead for better allocation of funds for the universities. Accordingly, Prof. R.C. Paul, President, AIU alongwith Dr. A.K. Dhan, VC, Ranchi; Dr.Gurbakhsh Singh, VC, Delhi; Prof. P.N. Srivastava, VC, JNU Delhi; Prof. Ramaranjan Mukherji, VC, Burdwan; Prof. N.M. Swani, Director, IIT Delhi; Shri G.B.K.Hooja, VC. Gurukula Kangri and Dr. Jagdish Narain, Secretary AIU met Shri Y.B. Chavan, Chairman, Shri N.V. Krishnan, Secretary and other members of the Commission : Justice T.P.S. Chawla, Dr. C.H. Hanumantha Rao, Shri G.C. Baweja and Shri A.R. Shirli on January 16, 1984 at 3.30 P.M.and submitted a memorandum on behalf of the universities.

During the course of discussion, it was pointed out that the University Grants Commission provides assistance to universities for creation of posts and other recurring expenditure for a specified period under Five Year Plans. Such recurring expenditure on the completion of the plan period, becomes the financial responsibility of the universities. They, in turn, seek the assistance of State Governments for this committed expenditure. The State Governments, which receive funds, as recommended by the Finance Commission for such expenditure, however, do not always provide for the required level of expenditure as part of the non-plan budget and this creates complications. It was therefore urged that the allocations made by the Finance Commission for educational sector should include a specific provision for 'Higher Education' for the guidance of the State Governments.

It was also pointed out that in some States no norms and specific procedures have been laid for determining non-plan grants to universities particularly for maintenance of campus facilities, students services and library. So the universities are unable to support adequate staff and working expenses needed by the universities for such facilities. New programmes have been initiated in the universities for raising standards and achieving excellence with the assistance of the University Grants Commission. The Centre of Advanced Study, College Science Improvement Programme, Remedial Courses, Central

Shri Y. B. Chavan, Chairman, Eighth Finance Commission talking to AIU Delegation.

Instrumentation and Computer facilities are some of these new activities. The expenditure on such programmes, when taken over by the universities/colleges, with the help of State Governments, would require sizeable maintenance grants, which should also be taken into account while making the allocations for the coming years.

The provision for 5% annual increase in the non-plan budget of universities is unrealistic. Subscription to Journals, especially foreign journals, are rising at the rate of 15 to 20%. Science laboratory equipment and cost of chemicals are also rising at the rate of 10 to 12% per year. While the University Grants Commission allows an escalation factor of 7%, in fact, most of the universities have estimated it in the order of 10% of the overall recurring expenditure annually.

The value of scholarships and fellowships available to students/research workers have to be continuously reviewed and their value has to be linked to the prevailing salary structures elsewhere in order to attract good students for the award of such fellowships. The requirement of funds for continuing existing scholarships/fellowships at the enhanced rates should therefore be included in the maintenance budget. The other two areas in which larger allocation of funds are needed is the modernisation of curricula which require provision for new types of textbooks, teaching aid, library equipment and upgradation of existing facilities for teachers using modern teaching methods.

The attention of the Commission was also drawn to the poor maintenance of students services including health, sports, hostels and messes etc. Over the years, this sector has been badly neglected for paucity of funds. Similarly, staff quarters for teachers and other employees have been poorly maintained. Most of the colleges are unable to maintain the physical facilities available on the campus resulting in a huge backlog on maintenance and require special grants for repairs. It was suggested that adequate provision should also be made for maintaining a proper watch and ward staff, public relation officer and horticulturist, which are essential for the proper running of the universities and upkeep of their campuses. ☐

AIU Delegation which met the Finance Commission on 16.1.84

L to R—Dr. Jagdish Narain, Mr. Anjni Kumar, Mr. G.B.K. Hooja, Prof. P. N. Srivastava, Dr. R.C. Paul, Dr. G.B. Singh, Dr. A.K. Dhan, Prof. N.M. Swani, and Prof. R. Mukherji.

Apart from acquisition of new laboratory and other equipments, the existing equipment is also required to be replaced after 10 to 15 years due to wear and tear or obsolescence and funds have to be provided in the non-plan budget of universities accordingly.

Repairs of buildings of the older universities are also costly. Grants for special and annual repairs should also form a part of maintenance budget and should be on a realistic scale, in any case not below the level of buildings maintained by Public Works Departments of the Government.

A Strategy for Self Reliance in Postgraduate Textbooks

L. Radhakrishna*

Postgraduate education in the Indian Universities in the Eighties can well be summarised as :

"From Western Textbooks to Eastern Notebooks"

Western Textbooks

A cursory glance at the prospectus and syllabus of any Indian University especially in Sciences, convinces one that all the textbooks prescribed for study as well as those for reference are authored by Western scholars and primarily marketed by the USA or the UK. Since the students offering M.Sc. run into hundreds, if not thousands, multiple copies of the prescribed textbooks written by a Westerner are being inevitably purchased by the University libraries. Even after 35 years of winning political independence, we do not have academic independence at the level of M.Sc. textbooks.

Draining of Foreign Exchange

Multiple copies of the same book from the West means draining of the precious foreign exchange and diversion of money into the Western Exchequer. (Note : This does profit some Importing Book Agencies at the expense of the nation and of course this should not be the reason for patronising foreign books **in multiple copies**). These Western books are very expensive. And then even after being costly, foreign books are procured by the Library. Do the students have the capacity to read them and benefit therefrom or even understand ?

Eastern Notebooks

The students of M.Sc./M.A. especially the first generation learners cannot understand or comprehend the exposition in the Western Textbooks. After all, these books are not written keeping the academic level and taste of the Indian Student in mind. Naturally, the student resorts to the class-room notes—Eastern notebooks—which are verbatim reproduced in the examinations after cramming. University Examiners moderate the question papers in such a way that even a mediocre student may manage to pass; and in such a mediocre-oriented question paper an average regular student scores around 80 percent, thus the marks get inflated. As the questions do not test the creative talents of the gifted students, there is no incentive for developing the faculty of thinking among the students. Is it desirable to perpetuate this state of affairs ?

Political Will and a Strategy

The subservience to the multiple copies of the Foreign textbooks can be overcome by bringing in a political will to formulate a definite timebound programme (say 4 years) for achieving **Complete Self-reliance (Sufficiency) in the Postgraduate Textbook Production**.

In any University Library one single copy of every Western Textbook is essential (and not more than one copy), since knowledge should be acquired from all corners of the globe. The UGC may make it obligatory for all the Universities to drop the provision for the purchase of multiple copies of foreign texts by removing these Western books from the list of prescribed texts.

Strategy

A national scheme for the generation of Indian Textbooks for M.A./M.Sc./M.Com./M.B.A. (in English) may be envisaged in the following way :

Time required for the First Draft of the Indian Text on a particular subject ...	1 year
Time required for the scrutiny of the First Draft of Text book by PROMOTERS (experts from National Institutes like the T.I.F.R.) ...	6 months
Time required for the Second Draft of the text after incorporating Promoters views ...	1 year
Time required for final scrutiny and approval by the promoters ...	6 months
Time required for typing the final draft ...	6 months
Time required for Printing, Publishing and Distribution ...	6 months
Total Period	4 Years

Senior University Teachers should be persuaded to write these original Textbooks in English primarily. At the national level, **not more than** three different textbooks need be permitted to be drafted on every subject or branch of a discipline.

Prestige of University Teachers

This type of self-reliance in textbook writing and adoption in all the universities does enhance the prestige of the University Teachers. The teachers indeed have to work very hard to digest the latest trends (the best that is known and thought in the world) in their respective fields of specialisation and present it to the Indian student in a comprehensible and simple style. In fact, it is only the Indian teacher who knows best the abilities and handicaps of the Indian student, and certainly a western author has neither the opportunity to understand the level of the student in India nor is he obliged to cater to the needs of the Indian students. It is high time that faith is reposed in the Indian University Teacher for self-reliance in textbook production. As in Russia, a good textbook writer should be given a pride of place in professional cadre on par with a good research worker. Thus this scheme not only saves foreign exchange but also enhance the national pride.

I hope in 5 years time the slogan cited at the beginning of this article will be changed into

"From Indian Textbooks to Creative Notebooks"

as the sum and substance of Indian University Education.

**Department of Mathematics, Shivaji University, Kolhapur.*

Silver Jubilee Week Celebrations of the Gorakhpur University

The Silver Jubilee Celebrations brought to the University of Gorakhpur a week of festive occasion. It spanned a number of activities — a National Symposium on "Jawaharlal Nehru and Modern India", enactment of plays and moot-court, Kavi Sammelan, Mushaira and sports. To crown it all, was the presence of the Prime Minister Mrs. Indira Gandhi and her Convocation address. The week, to say the least, stood apart from the average run of days at the University.

The celebrations began on Nov. 7, 1983 in the University auditorium with Smt. Swaroop Kumari Bakshi, Education Minister of U.P. performing the inaugural ceremony. Speaking on the occasion the Education Minister congratulated the faculty members for the achievements of the University and promised to extend all possible help and cooperation in its all round development. Prof B.M. Shukla, Vice-Chancellor of the University, expressed his sense of gratitude to the Education Minister who could, despite her busy schedule, find time to spare in the midst of the members of the University community. The same day a national seminar on Jawaharlal Nehru and Modern India" was inaugurated by Shri K.C. Pant, Chairman, Cultural Advisory Board of Energy and Member of Parliament. In his inaugural address Shri Pant dwelt on the remarkable achievements of Pandit Nehru in the field of national reconstruction and international affairs and underlined, in the process, the sagacity and prudence with which he handled the intricate problems of his time. To him entirely, he told the distinguished audience, we owe our identity in the comity of nations. Mrs. Bakshi also spoke on the occasion and her speech was reminiscent of old days, old memories connected with the life of Pandit Nehru.

On Tuesday Nov. 8, 1983 two sessions of the symposium were held — one in the morning and another in the after noon. The concluding session was addressed by Prof. Asha Ram, who called attention to the role of Pandit Nehru in creating a democratic welfare state.

The same day the athletic association of the University organised a series of basket ball matches on the new basket ball court which was earlier inaugurated by Prof. B.M. Shukla, Vice-Chancellor of the University. On Nov. 9, 1983, a festival cricket match was also held between the current team of the University and past cricketers. The Vice-Chancellor instituted a running Trophy in commemoration of Silver Jubilee of the University.

Later in the evening Dr. J.B. Harrison, formerly Prof. of History at the School of Oriental and African Studies, London University gave a talk on "Violence and Bribery as instruments of state".

On Nov. 10, 1983 at 10 a.m. a grateful academic community honoured the President of the Gorakhpur University Foundation Society, other founder-members, former Vice-Chancellors of the University and the first professors of the various teaching departments who have retired from the service of the University.

The Chancellor, Shri C.P.N. Singh declared the convocation open on Nov. 11, 1983 and also welcomed the chief guest, Prime Minister Mrs. Indira Gandhi. Prof. B.N. Shukla, the Vice-Chancellor of the University thanked the Prime Minister and other guests.

In his speech he provided a close-up of problems and perspectives of Gorakhpur University and advanced a forceful plea for the residential character of the University, and opening of the faculty of agriculture. In the evening a fare of classical music, vocal and instrumental, was presented in the convocation pandal.

On Saturday, Nov. 12, 1983 a session of moot-court was enacted portraying successfully the dialectics of law and intricate aspects of legal proceedings. In the evening a Hindi drama, an adaptation from Nirmala Verma's novel "Ek Chithara Sukha" (A shred of happiness) was staged in the University pandal by artists of 'Rupantar', a dramatic society of Gorakhpur. Later a Kavi Sammelan began at 8.30 P.M. in the convocation pandal and continued far into the night.

On Sunday Nov. 13, 1983 an inter-collegiate extempore elocution competition was organised in the Majithia building of the University.

The last in the series of functions during the Silver Jubilee Week was the Mushaira—an occasion for a gathering of distinguished Urdu poets.

Mrs Swaroop Kumari Bakshi, Education Minister of U.P. inaugurating the Silver Jubilee Celebrations of Gorakhpur University.

A week of intense and festive activities came to an end with the University collecting itself with hope and confidence for achievements in the years ahead.

Bharathiar University introduces "Project Method" for UG students

Bharathiar University has recently taken a decision to introduce Project Method of learning to undergraduate students from different faculties in order to make them undertake independent self learning, problem solving projects to make education meaningful and purposeful at undergraduate level. A 3-day workshop on 'Project Work Guidance and Evaluation' was held involving 220 teachers from 16 different disciplines and from 32 affiliated colleges. The objectives of the workshop were:

(i) to introduce the basic concepts of project method of learning, individually and in groups, in several subject areas;

(ii) to prepare detailed project briefs outlining the scope and content of the project need and purposes of project, objectives of the project, tasks and activities involved in the project, specifying end product of the project and finally, giving details of the evaluation of the project;

(iii) to prepare detailed guidelines for monitoring project work;

(iv) to suggest ways and means of integrating project work into the present under graduate curriculum.

Inaugurating the workshop, Prof. G.R. Damodaran, former Vice-Chancellor of Madras University commended the University on the decision to introduce project work for undergraduate students in all non-professional courses to make students competent to solve problems in situations outside the class room. Prof. V. Natarajan, Director of the Workshop in his keynote address dealt on the basic concept of project work and reiterated the fact that students choose their own areas for self learning, work in small groups to solve problems, develop ability to collect data, analyse data and judge usefulness of the data in solving problems and finally, a skill of communicating either orally or in the form of written reports. These abilities, he felt had been neglected for the simple reason that the project method was not adopted on a large scale for undergraduate students. Lead lectures were given on preparation of project brief, designing, monitoring and evaluating individual/group projects, and preconduct, conduct and post-conduct stages of project work. Participants assembled in small groups and after detailed discussion and deliberation came up with a number of projects in their subjects together with preparing a comprehensive project brief for one project to serve as an illustrative example.

Follow up action is proposed to be taken up by individual groups to involve other teachers in the colleges and prepare project briefs for all the projects identified by the Workshop. It is proposed to introduce this project method after going through all preparatory work from the start of the next academic year in June 84.

Gauhati Varsity's National Integration Programme

A two-day National Integration Programme of Traditional Tribal Songs and Dances was organised on 19th and 20th December, 1983 at Haflong Govt. College, Haflong, the district Headquarter of North Cachar Hills of Assam. The programme, sponsored and financed by the U.G.C., was organised by the Department of Folklore Research, G.U. under the direction of Dr. B.N. Datta, the Departmental Head.

The programme was aimed at arousing among the tribal students at the college and university level a healthy respect for and interest in their respective traditional forms of songs and dances by encouraging them to participate in traditional items in an uninhibited manner. Besides, it aimed to provide an opportunity to the tribal students belonging to different groups to get acquainted with one another's culture and to foster among them a spirit of understanding and amity and give the tribal youth an orientation towards appreciation of the good things of traditional tribal life and values. By living in the same camps and by having discussion session the students were given ample scope for the exchange of ideas on their own cultural heritage and to pave the way to preserve them in keeping with the changed circumstances. The students were drawn from two hill districts from Assam viz. North Cachar Hills and Karbi Anglong (Diphu Govt. College and Haflong Govt. College) and the plains of Assam (to be represented by Gauhati University and Dudhnoi College).

The participants consisted of 24 students from Diphu Govt. College (Karbi, Rengma Nagas tribes), 50 students from Haflong Govt. College (Dimasa Kachari, Kuki, Mizo, Jaintia, Jemo Naga, Vaiphei Lampak tribes), 11 students from Dudhnoi College and Gauhati Univertity (Boro and Rabha plain tribes).

The opening session of the programme was inaugurated by Mr. Hojai, Chief Executive Member, District Council, North Cachar Hills and was attended by the teachers and students of Govt. Haflong College and many distin-

Surjit Singh Dies in Accident

We deeply mourn the sad and untimely demise of Shri Surjit Singh, a Hockey Olympian who died in a car accident near Jullundur. The pain is more deeply felt because Shri Surjit Singh shot into prominence when he was representing Combined Universities Hockey Team in the Jawaharlal Nehru Hockey Tournament in Delhi. Our heartfelt condolences to Mrs. Chanchal Randhawa and the bereaved family in their irrepairable loss.

guished persons of the town. The brochure brought out on the occasion was released by Dr. B. Nath, Development Officer of the G.U. The valedictory function was graced by the presence of Sri H.N. Barthakur, Director, College Development Council, G.U. as the chief guest. In addition to the participants the programme was attended by the teachers of Folklore and Anthropology Deptts., G.U. and Haflong College, Haflong.

National Integration Week at Gujarat Vidyapith

A National Integration Samiti of the Gujarat Vidyapith has been working since 1975. Every year it arranges different types of programmes aimed at social, religious and linguistic integration like visit to Andaman, Sri Lanka, etc. and Seminars on Harijans and National Integration, Islam for integration, Linguistic minorities of Ahmedabad, visits to Tribal areas, etc. This year it organised a six day programme for celebration of National Integration week. 50 students were invited from various colleges of Gujarat state for attending the six-day (26-12-83 to 31-12-83) integration camp. The students were selected from different religious denominations, such as Hindu, Muslim, Sikh, Christian, Jain. They were also from both the sexes. During their six-day stay in the Gujarat Vidyapith campus, visit to different holy places such as Jain temple, Hindu temple, Mosque, Church, etc. was arranged. Observation of ritual process of some religions was also arranged. Every night holy worship songs from all religions were presented by devotees of different religions. Lectures of scholars belonging to different religions were arranged. It is proposed to publish these lectures in a booklet.

The participants were presented 7 books of Gandhian thought having a bearing on equality of all religions and religion as a spiritual source of inner strength rather than a sect.

Vice-Chancellor Prof. Ramlal Parikh distributed certificates and books to the participants and called upon them to cultivate a spirit of mutual understanding and adjustment as well as tolerance which are the fundamental components of Indian culture. He further said that universities have a special responsibility in promoting these values without which education is meaningless.

This Committee is scheduled to visit Sikkim also for the purpose of discovering India to understand and promote the spirit of unity in diversity.

Dr. Ambedkar Memorial Lecture at Karnatak Varsity

Under the auspices of Dr. Babasaheb Ambedkar Chair in Political Science, Justice O. Chinnappa Reddy, Judge of the Supreme Court of India, delivered two special lectures on the subject, "Legal Theory and Social Change—the Indian Scene" on 21 and 22 December 1983 in the Senate Hall of the Karnatak University. Dr. D.M. Nanjundappa, Vice-Chancellor, presided. After a special introduction of the Chief Guest by the Vice-Chancellor, Dr. A.M. Rajasekharia, Dr. Babasaheb Ambedkar Professor of Political Science, welcomed the gathering and explained the programmes of the Chair.

In his first lecture, Justice Chinnappa Reddy examined the various legal theories obtaining in current jurisprudence such as positivism, realism and sociological interpretation, and argued cogently for a Marxist approach to the problem of law. Thus, he emphasised the importance of interpreting legal theory and practice in terms of the presuppositions of historical material. This meant the understanding of law and its practice as a reflection of the basic structure of society, comprising the forces of production and relations of production. Hence legal theory should be analytically related to the notions of class rule and class conflict. He also saw a clear connection between bourgeois rule and domi-

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nance of reglious superstitions. In his second lecture, the learned Judge attempted a trenchant and radical analysis of the functioning of the Indian judicial process, and demonstrated the nexus between judicial interpretations and the class nature of the society. Citing specific cases, especially the Bank Nationalization case and A.K. Gopalan case, he showed how the same has come to be interpreted differently in the interest of the ruling classes which control the means of production and political power. On the second day the Hon'ble Minister of Education Government of Karnataka was present.

Models of Teaching Seminar held at Indore

The Department of Education, Devi Ahilya University, Indore conducted a six-day Seminar on Models of Teaching in December 1983. This seminar was sponsored by the UGC.

About 35 teacher-educators and resource persons from different states viz. Gujarat, Maharashtra, Andhra Pradesh, Haryana, Punjab, Tamil Nadu, Uttar Pradesh and Rajasthan attended.

Four main families of Teaching Models : (a) The Information Processing Models—Bruner and Ausubel; (b) The Social Interaction Models—Role Playing and Social-Simulation; (c) The Personal Models-Synectics; and (d) Behaviour Modification Models-Programmed Learning were discussed and demonstrated. The curricular and structural implications of these Models of Teaching were also highlighted for their implications to teacher education and school system in India. In addition to it, the Multi-Level Reading Laboratory prepared by Dr. (Mrs.) Madhuriben Shah was examined for its field application.

Varsities badminton team for national championship

The following players have been selected to represent the Combined Universities Badmintom (M & W) Teams in the National Badminton Championships being held at Poona from 25th to 31st January, 1984 :

MEN

1. N.K. Subhedar (Captain)
— Delhi University

2. Chandra Mohan
— Bombay University

3. Arvind Katyal
— Punjabi University

4. Dharminder Batra
— Guru Nanak Dev University

5. Harinder Uppal
— Guru Nanak Dev University

6. Puneet Kumar
— Meerut University

WOMEN

7. Rajni Sidhu
— Punjabi University

8. Sunita Rani
— Kurukshetra University

A brief coaching camp for the members of the team is in progress at the Indian Institute of Technology, Powai, Bombay.

News from Agril. Varsities

Farm Technology Seminar held at PAU

A seminar on appropriate technology for farm mechanisation was held at the Punjab Agricultural University recently. The seminar was jointly organised by the Department of Farm Power & Machinery of the PAU and the National Productivity Council, Chandigarh and was attended by delegates from Industry, Agricultural Universities, Agro-Industries Corporations, Banks, Indian Standards Institution and the State Department of Agriculture.

Inaugurating the seminar, Dr. K.S. Nandpuri, Director of Extension Education of the PAU said that Engineering Technology had played a vital role in increasing production. He pointed out that dwarf varieties evolved by the Plant Breeders were better suited for mechanical harvesting and threshing and helped in adoption of appropriate technology. Dr. Nandpuri suggested that the engineers should develop a low-horse power four-wheel tractor for small farmers.

Dr. S.R. Verma, Dean, College of Agril. Engineering in his presidential address said that tractors, threshers, tube-wells and other farm machinery used in Punjab alongwith other inputs like seeds, fertilizers, pesticides were responsible for increased production and productivity.

Papers were presented on different farm machines, machinery standardization and technology transfer.

A short duration blackgram for rainfed cultivation

In Tamil Nadu, as many as 12 varieties of blackgram have been developed and released for general cultivation. Among them Co. 1 and Co. 3 are recommended for cultivation under rainfed condition during monsoon season (September-October).

These varieties are fairly long duration which matures in 105 and 85 days respectively. Hence attempts were made to develop short duration varieties suitable for rainfed cultivation which resulted in the variety Co. 5. This was released from the Tamil Nadu Agricultural University recently for general cultivation.

The strain Co. 5 is a pure line selection from the Musiri local. It is a high yielding selection characterised by compact growth, determinate habit, photo-insensitivity and synchronous maturity with a duration of 70-75 days from seed to seed.

At University research stations under rainfed condition over five years Co. 5 recorded an average grain yield of 795 kg/ha as against 605 kg/ha for Co. 3

and 625 kg/ha for Co. 4. The percentage of increase being 31.7 and 25.4 percent over Co. 3 and Co. 4 respectively. Under farmers' holdings in different districts of the State over five years as a dry crop. Co. 5 recorded a mean yield of 765 kg/ha compared to 610 kg/ha of Co. 3 the percentage increase in yield being 25.7.

Under irrigated condition the potentiality of Co. 5 was of the order of 1275 kg/ha as compared to 1045 kg/ha of Co. 3 and 1225 kg/ha of Co. 4.

This variety is found to be moderately resistant to powdery mildew and leaf crinckle virus, and moderately resistant to pod borer.

Punjab wheat crop being hit by manganese deficiency

A large number of reports are pouring in from different districts of Punjab where the wheat crop is suffering from manganese. Micronutrients experts in the department of Soils of the Punjab Agricultural University have confirmed that the deficiency of manganese in wheat crop has appeared especially on Sandy soils or highly permeable ones under rice-wheat rotation.

According to these experts this deficiency occurs largely as a result of leaching losses of manganese from the root zone with rice cultivation. The symptoms of maganese deficiency in wheat are: Interveinal chlorosis on the middle leaves with light greyish yellow to pinkish brown coloured specks of variable size confined largely to two-third lower portion of the leaf. Later, specks coalesce forming pinkish brown streaks or bands in the middle part of the leaf while the veins remain green.

The PAU experts have advised the farmers to spray immediately the affected crops thrice with 0.5% manganese sulphate solution (half kg. manganese sulphate in 100 litres of water) at 6 to 7 days' interval on clear days.

News from Abroad

Infra-Red Communication System developed in University of Sydney, Australia

Researchers at the University of Sydney have developed a method of transmitting computer information from one part of an office to another without the use of cable or wire connections.

The system uses a transmitter which sprays invisible data-laden infra-red light beams around the ceiling and upper walls of an enclosed space so that they bounce repeatedly until picked up by a receiver.

The spraying system, developed by Dr. Ian Parkin, a senior lecturer in computer science, and professional assistant Dr. John Zic, is called diffuse broadcasting.

"Other systems using infra-red light incorporate a "satellite" receiver and transmitter located as a globe on the ceiling of the room in which computers and terminals are operating, but transmissions are likely to be broken when a person or object comes between transmitter and receiver, causing "information shadows".

In the diffuse broadcast system the infra-red light beams are broadcast to virtually all parts of a room by a small dish of light-emitting diodes (LEDs). If one or more of the transmissions are blocked by information shadows, others carrying the same message will still reach the intended receiver.

The receiver is programmed to recognise the message and acknowledge only successful, and complete, receptions.

Even if there are more transmitters and receivers working in the same room at the same time only the receiver programmed to receive a particular message can receive it.

The intensity of the infra-red light used in diffuse broadcasting is only one millionth the strength of infra-red radiation in sunlight and consequently involves no health hazards.

The rate of switching of the LEDs is limited to between 10 and 500 kHz so as to avoid interference from other sources of infrared emissions, such as fluorescent lights and electric heaters.

Dr. Parkin believes the system has the potential to be the cheapest and most practical medium for high-speed digital communications within offices or homes using computers or similar equipment.

The cost of wiring within the room is eliminated. There is also no need to plan a room layout to accommodate the system. If there is a subsequent need to move computers or terminals or similar equipment such as word processors or digital telephones from one site to another, one needs only to worry about the machines themselves.

Another application could be used by robots, Dr. Parkin said. Insted of robots having communication wiring attached to them like umbilical cords, they could wear infra-red ray "hats" to receive commands or communicate with one another as they move from one task to another.

A complete unit, consisting of the LED transmitter dish, LED driver circuitry board and a receiver of photo diodes takes up a space equivalent to three house bricks. Dr. Parkin is confident that with miniaturisation techniques already in use the size could be reduced enough to fit the unit inside most computer and terminal cabinets.

Dr. Parkin said the prototype now being tested would cost $600, but mass production would reduce this to between $50 and $100.

Further information can be had from Dr. Ian Parkin, Senior Lecturer, Basser Department of Computer Science, University of Sydney, Sydney, NSW, 2006, Australia.

Educational Ideas of Grundtvig and Gandhi

Ramlal Parikh*

Text of the address given to the plenary session of the Grundtvig International Conference held in Copenhagen on 12th September, 1983.

Although Grundtvig and Gandhi were born in different centuries, there are some remarkable similarities in some of their educational views. Grundtvig was born in 1783 in the later part of the 18th century. Mahatma Gandhi was born in 1869 in the later part of the 19th century. Despite this difference of almost one hundred years in their birth, Grundtvig seems to be forerunner of some aspects of Gandhiji's educational vision. Both have expressed universal truths about some fundamental aspects of education.

Although Grundtvig's writings in English language are very limited, they do indicate a clear trend of his vision of education. The expression "school for life, instead of school for death" strongly indicates Grundtvig's dissatisfaction with traditional institution of schooling entirely based on book-learning. He described the school system as "rigid scholasticism". This is a very apt description of the educational system of late eighteenth century which persists in many ways even in late twentieth century. Gurudev Tagore—a great Indian poet and educationalist—also propounded similar views through Vishva-Bharati—a university founded by him and wedded to global perspectives of education. Grundtvig saw in the traditional school system a process of alienation from life. Gandhiji also voiced the same concern vehemently. Education through traditional school system alienates and uproots students from their homes, community and native culture without providing a sustainable alternative. The equilibrium between home, school and community has virtually collapsed and the school continues to drag itself in isolation. This new imbalance is at the root of widespread frustration in our younger generation which continues to be bred up in the traditional school system for over two centuries now. Both Grundtvig and Gandhi seem to have stuck at the root of this malaise and expressed strongly in favour of life-long and life-centred education in opposition to education away from life. Grundtvig described his concept as a "school for life". Gandhi described it vigorously as a "womb to grave" learning process.

Grundtvig is known in India as a father of the folk high school movement in Denmark. The idea of folk high schools had so profound influence on Indian educational planners that in early fifties a special team of educationalists was sent by the Government of India to Denmark to study the working of the folk high school programme. The team returned with great appreciation of folk high school programme and advocated setting up of similar folk school type, activity-based, rural institutes. Ten rural institutes were set up immediately with the financial support of the Government of India. Grundtvig is thus known to India through folk high school programmes of adult education.

Grundtvig's ideas and approaches are very relevant to India even today in combating the enormous problem of adult illiteracy of 100 million people of 15-35 age group in addition to almost 100 million illiterates in the age group above 35 years. The traditional school has not succeeded in resolving this vital problem of Indian national life. As against 100 million students enrolled in schools equal number is not enrolled in the schools and 50% of the enrolled drop out in the first two years of schooling. Thus the number of people out of school is of astronomical size. Since our school system is unable to meet the challenge of this magnitude, our eyes turn to various out-of-school programmes and Grundtvig with his ideas of folk schools appear relevant to us. Thus the influence of ideas put forward by Grundtvig is profoundly felt in India, and we continue to draw inspiration from his idea of folk school programme as a reinforcement to what Gandhi stated in the first decade of the 20th century which later developed as 'Nai Talim—New Education with community life, community service and socially useful productive work as its integral components, of education.

Grundtvig raised his voice against the domination of Latin language as a medium of instruction and strongly pleaded for using Danish language in place of Latin. His opposition to a foreign language, whether classical or modern, was so strong that he even denounced Latin as a dead language. Grundtvig expressed his concern for mother-tongue with

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Vice-Chancellor, Gujarat Vidyapith

great vehemance when he stated that "country and people are very poorly served by erudite men who shun their mother-tongue". Gandhi and Tagore fought similar battles against English language medium in Indian education despite their intense love for English literature. Education through mother tongue is the foundation of educational ideas of all the three great men. Gandhi made a rule in the Gujarat Vidyapith—a University level institution founded by himself—that mother tongue shall be the medium of instruction at all stages of education. This has given access to higher education to large number of rural and tribal youths of Gujarat State in India.

Secondly, Grundtvig pleaded for preservation and development of 'cultural identity' of the people in any educational process and therefore pleaded for learning of mother tongue, national history and Danish culture. Gandhi also pleaded almost with same force and in greater detail for first inculcating values of Indian culture in any process of learning. Both of them seem to advocate a native foundation for education. Grundtvig stressed through knowledge of national history through narrative and song. Gandhiji also stressed the need for understanding Indian culture but with a caution of great fore-sight in the words "No culture can live if it attempts to be exclusive" and further pleaded for "teaching mass music."

Thirdly, Grundtvig pleaded for knowledge of life, rather than books alone as a predominant component of learning. According to Grundtvig, "Intrinsically all 'letters' are dead whether written by the hand of an angel and with a heavenly pen. For every kind of book knowledge which does not coalesce with a corresponding life on the part of the reader is simply dead". He also stated "any education which demeans and disregards this life is self-defeating, suffocates people, and harms the nation." Later after a century, Gandhi stated "real education consists in drawing the best out of yourself—what better book can there be than the book of humanity ....literacy in itself is no education." Obviously, Gandhi goes further than Grundtvig and becomes more specific when he states that "the utterly false idea that intelligence can be developed only through book reading should give place to the truth that the quickest development of the mind can be achieved by artisan's work being learnt in a scientific manner ....Literary training by itself adds not an inch to one's moral height, and character building is independent of literary training."

Fourthly, Grundtvig fought for freedom of church and consequently for education from state control and state interference. Gandhi and Tagore in India also vehemently pleaded for education being free from state control. All the three felt that learning could flourish in an atmosphere of freedom only. Gandhi used the Sanskrit saying from Indian tradition in support of freedom of education. *Sa Vidya Ya Vimuktaye*—that is learning which liberates you. This has been set as an ideal of the Gujarat Vidyapith. The liberation here is to be viewed from widest perspective of working for liberation of soul and ultimate salvation of mankind.

Grundtvig worked for strong native base for learning. Gandhi also pleaded similarly. Following words of Gandhi express his reconciliation between world brotherhood and love for native culture :

> "I do not want my house to be walled on all sides and my windows to be stuffed. I want the cultures of all lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by anybody."

Some of these similarities between Grundtvig and Gandhi does not mean that they have identical approach in their scheme of educational change but what is important is that they have by and large a common vision of education.

India is set on a pledge to liquidate illiteracy of 100 million people in coming 10 or 15 years. Adult literacy programme is a part of minimum needs programmes of our national development. The University Grants Commission has widened the dimensions of higher education through a policy statement that "Extension as a third dimension of higher education will receive equal importance with Teaching and Research". This is the most significant measure which has radical potentiality of bridging the wide gap between Indian Universities and mass of our people. Thirty prominent universities and 600 colleges have now adult and continuing education centres as an integral part of the higher education system.

Indian Society for Community Education is formed for promoting community education. A conference of educators from different parts of India adopted a declaration on 30th November 1982 that indicates the inspiration of Grundtvig in following words :

> "Having met in this year of 200th birth anniversary of the Danish educator, Mr. N.F.S. Grundtvig—the founder of Folk-schools movement—hereby dedicate ourselves.......to the educational processes in its integral form of cognitive, affective and connative, thus inter-weave three major agencies viz. Home, School and Community to give a social cohesion".

It concludes with significant resolve :

> "The conference appeals to Indian Educationists to celebrate Grundtvig Bicentenary in 1983 with a renewed resolve to pursue non-formal and out-of-school education as a response to the prevalent crisis in education."

This is how Grundtvig continues to inspire us in taking education to folk i.e. common people. □

THESES OF THE MONTH

AIU LIBRARY

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

A list of Doctoral Theses Accepted by Indian Universities

BIOLOGICAL SCIENCES

Marine Biology

1. Sudha, K.C. *Studies on the larval and post-larval fishes of Trivandrum Coast.* U Ker, Trivandrum.

Biochemistry

1. Annamala, P.T. *Studies on the biochemical effects of glibenclamide.* U Ker, Trivandrum.

2. Baruah, Kanak Chandra. *Study of alcohol sensitivity in animals of different blood groups.* Gauhati U.

3. Bhargava, Purnima. *Studies on cerebral carbohydrate and lipid metabolism in developing rat during undernutrition.* BHU, Varanasi.

4. Haldar, Subrata. *Biochemical studies on membrane properties of* **Vibrio cholera** *under normal and drug resistant conditions.* U Calcutta.

5. Lal, Har Krishan. *Characterisation of fungal component(s) eliciting phytoalexin production in chillies,* **Capsicum annum** *L.* HAU, Hissar.

6. Renuka. *Giardiasis : Clinical and biochemical aspects.* PAU, Ludhiana .

Botany

1. Ajmera, Rajni Kant. *Studies on the comparative morphology and anatomy of seedling development in the Gramineae.* U Raj, Jaipur.

2. Ayachi, Akhlesh Kumar. *Studies on microbiology of leaf surface of* **Piper beetle** *L. with special reference to leaf rot disease caused by* **Phytophthora parasitica** *var.* **piperina.** RDV, Jabalpur.

3. Bandyopadhyay, Nirmalya. *Cytology, cytochemistry and tissue culture of some commercially important plant species.* U Calcutta.

4. Chaturvedi, O.P. *Biomass structure, productivity and nutrient cycling in* **Pinus roxburghii** *forest.* Kum U, Nainital.

5. Duara, Lakshi Raj. *Pathological and certain biochemical aspects of infection and rotting of* **Pyrus malus** *L. fruit by fungi in Kameng District of Arunachal Pradesh.* Gauhati U.

6. Joshi, Subodh. *Genetic studies on sweetpepper,* **Capsicum annuum** *L.* Kum U, Nainital.

7. Mahajan, Ashok Dayaram. *Algal flora of paddy fields in Kaira District, Gujarat: Cyanophyceae.* SPU, Vallabh Vidyanagar.

8. Mathew, Lillyamma. *Anatomical and palynological studies on some Verbenaceae.* SPU, Vallabh Vidyanagar.

9. Mehta, Archana. *Biochemical studies of fruit rot of* **Trichosanthes dioica** *Roxb. and* **Solanum melongana** *Linn. caused by* **Fusarium** *Sp.* HS Gour, Sagar.

10. Nabeesa, E. *Histochemical and biochemical aspects of flowering in* **Abelmoschus esculentus.** U Calicut.

11. Pall, Balbir Singh, *Biochemical studies of resistance in minor millets with particular reference to phenolase and glucosidase.* RDV, Jabalpur.

12. Potdar, Suryakant K. *Fungi of Malshej Ghat.* U Poona.

13. Prasher, Indu Bhushan. *Nutritional studies of some fungi.* Pb U, Chandigarh.

14. Punetha, N. *Morphological and anatomical studies in the family Gleicheniaceae.* Kum U, Nainital.

15. Subba Rao, P.V. *Biology and propagation of* **Gelidiella acerosa** *(Forskal) Feldmann at Hamel in the Mandapam region.* BHU, Varanasi.

Zoology

1. Agarwal, Ashok. *Studies on mammalian epididymis.* BHU, Varanasi.

2. Chakraborti, Subrata. *Comparative and physiological cytology of the avian pineal apparatus.* U Calcutta.

3. Ghosh, Subha. *A survey of the neuroendocrine system in dipterans.* RDV, Jabalpur.

4. Gupta, Braj Bansh Prasad. *Endocrine control of oxidative metabolism in Indian garden lizard,* **Calotes versicolor.** BHU, Varanasi.

5. Janardhana Rao, Kodali. *Studies on the fishery and biology of important prawns of Lake Kolleru in Andhra Pradesh, with an account of* Macrobracium *culture in pond ecosystem.* Andhra U, Waltair.

6. Joshi, Archana. *Limnological investigations in Sat Tal Lake.* Kum U, Nainital.

7. Khanna, Neerja. *Studies on the carbohydrate, protein and lipid metabolism in a fresh water teleost,* **Puntius conchonius** *Ham.* Kum U, Nainital.

8. Negi, Vandana. *Zooplankton population and secondary production in Lake Khurpatal.* Kum U, Nainital.

9. Pardeshi Lal. *Role of thyroid in reproduction of migratory redheaded bunting,* **Emberiza bruniceps.** BHU, Varanasi.

10. Roy, Jagat Kumar. *Chromosome organization in* **Drosophila.** BHU, Varanasi.

11. Shah, Lata. *Studies on the taxonomy of some beetles of different terrestrial habitats of Nainital.* Kum U, Nainital.

12. Sharma, Neelima. *Investigations on limnology of tank ecosystem near Allahabad with particular reference to abundance and seasonal distribution of plankton and benthos.* HS Gour, Sagar.

13. Swayam Prabha, M.S. *Studies on the physiological and biochemical relations between the ovary and the reproductive tract in the female slender loris,* **Loris tradigradus lydekkerrianus.** Bangalore U.

14. Velicheti, Saraswati H. *Effect of homeopathic drug,* **Pulsatilla** *on reproduction of rats and consequential changes exhibited by neurons of arcuate nucleus.* BHU, Varanasi.

Medical Sciences

1. Dube, Rajeev, *Studies on correlation of the dielectric constant with formulation parameters.* HS Gour, Sagar.

2. Ghosh, Pradipkumar. *Role of sex-dependent urinary protein in adrenocortical and gonadal activities in the male rats.* U Calcutta.

3. Gopinathan, K. *Bilateral asymmetry in the number of cells in the dorsal root ganglia related to nerves supplying the forelimbs of the rabbit.* MDU, Rohtak.

4. Gupta, Krishna. *Blood lactate and pyruvate as indices of adequate oxygenation.* BHU, Varanasi.

5. Kannan, K. *Studies on the immunotoxicologic evaluation of endosulfan in rodents.* JNU, Delhi.

6. Kapoor, Sunil. *Study of potential neuromuscular blocking quaternary ammonium steroids.* Pb U, Chandigarh.

7. Mitra, Jagabandhu. *Study on reproduction function after abortion.* U Calcutta.

8. Pandit, Jayanta Kumar. *Biopharmaceutical evaluation of some selected dosage forms of phenylbutazone.* BHU, Varanasi.

9. Pandya, Narhari. *Vrihtrayee mein vikirna shalakyavigyan: Ek gaveshanatmak adhyayan.* U Raj, Jaipur.

10. Sreenathan, R.N. *Studies on the teratogenic effects of acetaldehyde in the rat.*BHU, Varanasi.

Agriculture

1. Bhat, Jagannath. *Studies on the physiology of post-harvest storage and corking disorders of apple in Kashmir Valley.* BHU, Varanasi.

2. Chand Karan. *Studies on the interaction of soil micro-organisms and dithiocarbamates.* Pb U, Chandigarh.

3. Datta, Manoranjan. *Studies on cross-pollination induced by irradiation and its utility in breeding for yield in groundnut,* **Arachis hypogaea** *L.* U Calcutta.

4. Garg, Hem Raj. *Comparison of breeding potential in backcross and F_2 populations of upland cotton,* **Gossypium hirsutum** *L.* PAU, Ludhiana.

5. Ghosh, Kunal. *Studies on the chemistry of humic substances.* U Calcutta.

6. Hari Vallabh. *Evaluation of herbicides for weed control in onion,* **Allium cepa** *L.* BHU, Varanasi.

7. Jha, Pankaj Bihari. *Combining ability and yield stability in crosses of maize,* **Zea mays** *L. involving inbreds from indigenous and exotic populations.* PAU, Ludhiana.

8. Kanwal, Kehar Singh. *Characterisation of gene effects and their implication in rice,* **Oryza sativa** *L. breeding.* BHU, Varanasi.

9. Paramjit Singh. *Genetics of grain quality in pearl millet,* **Pennisetum typhoides** *S&H.* PAU, Ludhiana.

10. Ranga Rao, Gudipati Pandu. *Studies on energy budget components of sugarcane crop.* Andhra U, Waltair.

11. Sandhu, Balbir Singh. *Effect of certain agronomic factors on the efficacy of metoxuron for weed control in wheat.* PAU, Ludhiana.

12. Sesha Reddy, Bothi. *Marketing of rice in Andhra Pradesh.* BHU, Varanasi.

13. Sharma, Hari Mohan. *Studies on soil plant relationship of gram,* **Cicer arietinum** *at different fertility environment in calcareous soils of North Bihar.* RAU, Samastipur.

14. Shaw, Shashanka Shekhar. *Relative preference of different host plants on orientation of oviposition development of* **Cliothrips indicus** *Bagnall and its seasonal activity.* JN Krishi, Jabalpur.

15. Singh, Kailash Narayan. *Genetic variability for alkalinity/salinity resistance in wheat.*BHU, Varanasi.

16. Singh, Ram Raksha. *Soil science and reaction availability of copper in calcareous soil.* RAU, Samastipur.

17. Singh, Reeti. *Studies on safflower rust,* **Puccinia calcitrapae** *var.* **centaureae***(DC.) Cumm.* JN Krishi, Jabalpur.

18. Sinha, Uma Shankar Prasad. *Synergistic effects of optimum and limited fertilisation in multiple cropping.* RAU, Samastipur.

19. Sud, Mohinder Pal. *Genetic analysis of induced polygenic variations in micro and macro-sperma lentils,* **Lens culinaris** *Medic.* HP Krishi, Palampur.

20. Sundararajan, R. *Residue studies of permethrin, a synthetic pyrethyroid insecticide, on tomatoes.* PAU, Ludhiana.

21. Uday Shanker. *Studies on mycodeterioration of finger millet seed during storage.* Mag U, Bodh Gaya.

22. Vaid, Krishan Lall. *Genetics of yield and quality traits in rajmah,* **Phaseolus vulgaris** *L.* BHU, Varanasi.

Horticulture

1. Narayan Das. *Heterosis and combining ability studies of diallelcrosses in brinjal,* **Solanum melongana** *L.* BHU, Varanasi

2. Rai, Chandra Shekhar. *Effects of urea GA_3 on vegetative growth, flowering, fruiting and fruit quality of guava,* **Psidium guajava** *L.* BHU, Varanasi

3. Shri Narayan. *Studies on air cooled storage of apple,* **Malus domestica** *Borkh cv. Red delicious in relation to pre-harvest treatments and picking maturity.* HP Krishi, Palampur.

4. Singh, Madan Mohan. *Relationship between ascorbic acid content and plant hormones on flowering and fruiting in apple,* **Malus domestica***; Borkh.* HP Krishi, Palampur.

Veterinary Science

1. Jalaluddin, A.M. *Experimental graded acute uraemia in bovines.* PAU, Ludhiana.

2. Mondal, Mohammad Motahar Hussain. *Studies on some aspects of the biology of* **Sarcoptes scabiei** *and the treatment of mange in domestic animals with some new acaricides,* PAU, Ludhiana.

3. Muraleedharan Nayar, K. N. *Evaluation of ether as general anaesthetic in buffalo calves.* HAU, Hissar.

CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in AIU Library during December, 1983.

EDUCATIONAL PHILOSOPHY

McCartan, Anne-Marie. The community college mission: Present challenges and future visions. *J Hr Edn* 54(6), 1983, 676-92.

Ramphal, Shridath S. Technology: A flawed God? *Univ News* 21(18), 15 Sept 83, 593-7.

Sinha, Rita. Vinoba Bhave's thought on education. *Edn Q* 35(2) 1983, 39-42.

EDUCATIONAL PSYCHOLOGY

Sharma, Radha Rani. Self concept and adjustment as factors in academic achievement. *Indian Ednl Rev* 18(2), 1983, 46-59.

Touron, Javier. Determination of factors related to academic achievement in the university: Implications for the selection and counselling of students. *Hr Edn* 12(4), 1983, 399-410.

EDUCATIONAL SOCIOLOGY

Aryes, Q. Whitfield and Bennett, Ronald W. University characteristics and student achievement. *J Hr Edn* 54(5), 1983, 516-32.

Bergendal, Gunnar. Higher education and knowledge policies: A personal view. *J Hr Edn* 54(6), 1983, 599-628.

Jain, Vinay and Jain, Promila. Campus unrest. *Univ News* 21(22), 15 Nov 83, 796-7.

EDUCATIONAL PLANNING

Jan Mohammad. Institutional planning. *Univ News* 21(22), 15 Nov 83, 794-5.

Lane, Jan-Erik. Higher education : Public policy-making and implementation. *Hr Edn* 21(18), 1983, 519-65.

EDUCATIONAL ADMINISTRATION

Collins, J. Stephen. Integrated systems approach to improving management. *Ednl Rec* 64(3), Summer 83, 23-7.

Desai, Uday. Vice-Chancellor: A man for all seasons. *New Frontiers Edn* 13(3), 1983, 1-20.

Ginsburg, Sigmund G. Avoiding financial exigency. *Ednl Rec* 64(3), Summer 83, 40-6.

GOVERNANCE framework for higher education. *Ednl Rec* 64(2), Spring 83, 12-18.

Halsey, A.H. Oxford's power game. *THES* (583), 6 Jan 84, 14.

Harman, Grant. The erosion of university independence: Recent Australian experience. *Hr Edn* 12(5), 1983, 501-18.

Lacey, Paul A. The politics of vitalising teaching. *New Directions Teaching Learning* (15), 1983, 95-105.

O'Connell, Colman. College policies off-target in fostering faculty development. *J Hr Edn* 54(6), 1983, 662-75.

Rainsford, George N. Change, growth and entrepreneurial opportunity in higher education administration. *Ednl Rec* 64(3), Summer 83, 20-2.

Satty, Thomas L. and Ramanujam, Vasudevan. Objective approach to faculty promotion and tenure by the analytic hierarchy process. *Res Hr Edn* 18(3), 1983, 311-31.

Trow, Martin. Defining the issues in university-government relations: An international perspective. *Studies in Hr Edn* 8(2), 1983, 115-28.

Verma, D.P. The state of our colleges. *Univ News* 21(23), 1 Dec 83, 827-31.

CURRICULUM

O'Neil, Michael J. and Jackson, Lorna. Nominal group technique: A process for initiating curriculum development in higher education. *Studies in Hr Edn* 8(2), 1983, 129-38.

Slaughter, Sheila and Silva, Edward T. Service and the dynamics of developing fields: The social sciences and higher education studies. *J Hr Edn* 54(5), 1983, 481-99.

TEACHING

Fox, Dennis. Personal theories of teaching. *Studies in Hr Edn* 8(2), 1983, 151-63.

Natarajan, V. Conventional teaching methods and technologies. *Univ News* 21(20), 15 Oct 83, 665-7.

EDUCATIONAL TECHNOLOGY

Lear, Erich. Computer-assisted instruction: Getting started and staying compatible. *New Directions Teaching Learning* (15), 1983, 49-57.

Reid, Fraser J.M. and Champness, Brian G. Wisconsin educational telephone network: How to run educational teleconferencing successfully. *British J Ednl Tech* 14(2), 1983, 85-102.

EVALUATION

Baker, Eva L. and Herman, Joan L. Task structure design: Beyond linkage. *J Ednl Measurement* 20(2), Summer 83, 149-64.

Haertel, Edward and Calfee, Robert. School achievement: Thinking about what to test. *J Ednl Measurement* 20(2), Summer 83, 119-32.

Harnisch, Delwyn L. Item response patterns: Applications for educational practice. *J Ednl Measurement* 20(2), Summer 83, 191-206.

Linn, Robert L. Testing and instruction: Links and distinctions. *J Ednl Measurement* 20(2), Summer 83, 179-89.

Schmidt, William H. Content biases in achievement tests. *J Ednl Measurement* 20(2), Summer 83, 165-78.

ECONOMICS OF EDUCATION

Adrian, William. The tuition dilemma in the Latin American University. *Int Rev Edn* 29(4), 1983, 449-64.

Mohrman, Kathryn. Liberal learning is a sound human capital investment. *Ednl Rec* 64(4), Fall 83, 56-61.

Wilson, Linda S. The role of university-based research in generating human capital for the economy. *Ednl Rec* 64(4), Fall 83, 40-9.

ADULT EDUCATION

Fernandes, Marjorie. Role of universities and colleges in adult and continuing education. *Indian J Adult Edn* 44(6), 1983, 17-22, 26.

Jayagopal, R. Adult and continuing education programme of the University of Madras. *Indian J Adult Edn* 44(6), 1983, 3-9.

Sangram Singh. Correspondence education: Problems and prospects. *Univ News* 21(21), 1 Nov 83, 700-2.

Venkataiah, N. and Adinarayana Reddy, P. Significance of adult, continuing education and extension programmes in universities. *Univ News* 22(1), 1 Jan 84, 17-19.

CLASSIFIED ADVERTISEMENTS

RANI DURGAVATI VISHWAVIDYALAYA
JABALPUR
Advertisement
Ref. No. Estt/83/970
Dated : 28th December, 1983

Applications are invited on the prescribed application forms for the following teaching posts on or before **15th February, 1984.**

1. **Professor :** One in Chemistry (Instrumentation/Inorganic)

2. **Readers :** One each for (i) Philosophy (ii) Sociology (iii) Chemistry and (iv) Hindi, Two each for (v) Economics (vi) Political Science (vii) Biological Sciences Department, (viii) Three in History and (ix) Four in Physics.

3. **Lecturers :** One each for (i) Sanskrit (ii) Philosophy, (iii) English (iv) Hindi (v) Sociology, (vi) Mathematics (vii) Physical Education, Two each for (viii) Law (ix) Biological Sciences Department, Three each for (x) Economics and (xi) Physics.

The minimum essential qualifications and scale of pay for these posts are exactly those that are prescribed by the University Grants Commission. The prescribed application forms (in 8 copies) together with the details of qualifications and specialisation as well as other details may be obtained by sending a postal order of Rs. 5/- in the name of the undersigned. The candidates who desire to get the application forms by Registered post should send an additional amount of Rs. 5/- by Postal Order for postal expenses. It should be clearly mentioned on the envelope in bold letters the name of the post applied for.

Note

The candidates who had applied earlier for the posts of Readers in (i) Economics (ii) History (iii) Political Science (iv) Physics, and Lecturers in (v) Sanskrit (vi) Philosophy, (vii) Economics (viii) English (ix) Law (x) Physics in the specialisation concerned need not apply again.

The University reserves the right not to fill up all or any post advertised above.

R.N. Tripathi
REGISTRAR

SARDAR PATEL UNIVERSITY
VALLABH VIDYANAGAR 388120
GUJARAT

Invites outstanding original research works of merit, carried out during 1978 to 1983 in "Solid State Physics" from researchers of Universities or Institutes deemed as university or Institute of National Level for the award of a cash prize of Rs. 4,000/- and a Gold Medal worth about Rs. 1000/- under "Hari Ohm Ashram Prerit Shri Harivallabhdas Chunilal Shah Research Endowment" which should reach the University latest by **28-2-1984.**

A specimen of application form and the terms and conditions can be had from the Sardar Patel University by sending a self-addressed envelope affixed stamps worth 100 ps. or in person.

REGISTRAR

MINISTRY OF EDUCATION AND CULTURE

(DEPARTMENT OF EDUCATION)

FRENCH GOVERNMENT SCHOLARSHIPS : 1984-85

Applications are invited from Indian nationals residing in India for the award of 29 (Twenty-nine) French Government Scholarships for Higher Studies/Training in 1984-85 in the following subjects:—

1. Microbiology
2. Molecular Biology
3. Medicine—Immunology (Fertility Control/Virology/Parasitology)
4. Solid State Physics/Laser Physics
5. Theoretical Physics/Astrophysics
6. Polymer Chemistry
7. Pure/Applied Mathematics
8. Computer Science
9. Agricultural Sciences (Plant Pathology, Sylviculture, Forestry)
10. Hydrology
11. Anthropology/Sociology
12. Linguistics
13. Fine/Applied Arts (Painting/Etching/Sculpture/Graphic Arts)

Atleast 2/3rd of the candidates will be nominated for Post-Doctoral Research and about 1/3rd for a III Cycle Doctorate (i.e. Doctorate of Speciality). Out of 29 scholarships, 3 will be reserved for the Fine/Applied Arts.

Duration : 12 months for Post-Doctoral Research and for training in Fine/Applied Arts. 2 to 3 years to prepare a III Cycle Doctorate.

Value : (at least)—1900 Francs per month for Doctoral Studies. 2400 Francs per month for Post-Doctoral Studies.

Travelling Expenses : Airpassage from India to France and back will be provided by the French Government. As far as possible this will be done from the nearest airport of the candidates place of residence, via Bombay or Delhi.

Maximum Age Limit : For Post-Doctoral Research : 35 years on 1-9-1984.

For Others : 30 years on 1-9-1984.

Relaxable by upto two years for Scheduled Caste and Scheduled Tribe candidates. The upper age limit and experience may be relaxed by not more than 3 months at the discretion of the Selection Committee, in the case of outstanding candidates.

Academic Qualifications Required

For Subject No. (1) to (12) : Uniformly good academic record, with 60% marks and above at the M.A./M.Sc./M.Tech. level in the subject selected or related fields and either two years research/teaching/professional experience (as on 1-4-1984) after the M.A./M.Sc./M.Tech. or M.Phil. with 60% marks and above.

However, for Subject No. (1) to (3) : Medical graduate with 60% marks and above and minimum 3 years of experience in research will also be considered.

For Subject No. (11) and (12) : A good knowledge of the French language is very important.

For Subject No. (13) : Uniformly good academic record, with 60% marks and above for Bachelor's Degree or Diploma in Fine/Applied Arts in the relevant fields from a recognised institution.

Alongwith the applications, the candidates must also enclose five photographs or slides of their works which they consider representative of their style etc. If possible, the photograph should be in colour and at least 9 cm× 13 cm in size.

French Language: Knowledge of French language will be treated as an additional qualification.

Placement: Confirmed acceptance from a French academic or research Institution will be treated as an additional qualification. Documentary evidence of this **must** be sent along with application.

NOTE I

(i) Candidates with equivalent foreign qualifications will also be considered.

(ii) Master's Degree means M.A./M.Sc./M.Tech. but not M.Phil. or Pre-Ph.D.

(iii) Except for Fine/Applied Arts, in all other cases, candidates for Post-Doctoral Research must possess a Ph.D. Degree.

(iv) Where Grades are awarded, the conversion formula of the University/Institution must be indicated.

(v) Candidates who have already been abroad for study/specialisation/training either on a scholarship or on their own, are eligible to apply only if they have been in India for at least three consecutive years after returning from abroad.

(vi) Candidates must furnish a detailed programme of study/research in France.

(vii) The candidates should have adequate knowledge of the geographical situation, culture and heritage of both France and India.

NOTE II

(A) APPLICATIONS IN SUBJECTS/FIELDS OTHER THAN THOSE SPECIFIED ABOVE WILL NOT BE CONSIDERED.

(B) CANDIDATES WHO DO NOT POSSESS THE REQUIRED QUALIFICATIONS **NEED NOT APPLY**

(C) APPLICATIONS WHICH DO NOT CONTAIN POSTAL ORDER (OR DO NOT MENTION THE NUMBER AND DATE OF POSTAL ORDER WHICH HAS BEEN SENT ALONG WITH THE ORIGINAL APPLICATION SENT THROUGH THE PROPER CHANNEL WHERE NECESSARY) WILL **NOT** BE CONSIDERED.

(D) SELECTION PROCEDURES ARE CONDUCTED ENTIRELY IN INDIA.

(E) APPLICATIONS OF CANDIDATES WHO ARE AT PRESENT ABROAD WILL NOT BE CONSIDERED.

Last Date : For obtaining Application Forms : **31st January 1984.**

For returning completed application forms to the Ministry of Education and Culture : **20th February, 1984.**

To obtain Application Forms and other particulars, apply enclosing an unstamped self-addressed envelope (23 cmx10 cm) and superscribing on the envelope "FRENCH GOVERNMENT SCHOLARSHIPS—1984/85" to :

MINISTRY OF EDUCATION AND CULTURE
(DEPARTMENT OF EDUCATION)

Section ES-1, Room No. 516, 'B' Wing, Shastri Bhavan
NEW DELHI-110001.

davp 511(86)/83

BANARAS HINDU UNIVERSITY

(Advertisement No. 11/1983-84)

Applications are invited for the undermentioned posts. The benefit of Provident Fund/Pension, Dearness Allowance, House Rent Allowance and City Compensatory Allowances are admissible according to University rules. The retirement age of University Employees is 60 years. The appointment will be made on one year probation on all permanent posts. Higher starting salary within the grade is admissible to specially qualified and experienced candidates.

Applications will be entertained on the prescribed form duly supported with a Bank Draft or Crossed Indian Postal Orders of Rs. 7.50 (of Rs. 2.00 for the candidates belonging to Scheduled Caste/Scheduled Tribes category) in favour of the Registrar, Banaras Hindu University towards the application fee. Application forms will be supplied free of cost by the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221005 on receipt of Re. 0.90 paise stamped self-addressed envelope of 23 cm × 10 cm size. Candidates called for interview for these posts will be paid actual Railway fare by the Second Class plus reservation charges for sleeper, if paid, and/or actual Bus fare from the present residence bothways by the shortest route as per University rules. No other expenses will be paid.

Applications for each post be sent separately alongwith attested copies of certificates and marksheets in support of the qualifications and experience mentioned in the application and be addressed to the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221005.

Incomplete application in any respect will not be entertained for consideration.

Those who are in service should apply through proper channel. M.O. or Cheque will not be accepted towards application fee.

Reservation : (1) A reservation of 15% in the case of Scheduled Castes and 7½% in the case of Scheduled Tribes will be made in the category of teaching posts upto the level of Lecturers only. (2) A reservation of 22½% (15% S.C. and 7½% S.T.) will be made in the category of non-teaching posts at the entry level.

The last date for receipt of application in the Office of the Registrar (Selection Committee Section), Banaras Hindu University either by post or by hand will be **15th February, 1984.** No applications shall be entertained after the last date from external, in-service employees and the candidates residing abroad.

Note

1. Number of vacancies are tentative and can vary according to needs.
2. Panel may be drawn for temporary appointment of Lecturers against future vacancies.

Grade

Professor: Rs. 1500-60-1800-100-2000-125/2-2500

Reader : Rs. 1200-50-1300-60-1900.

Lecturer : Rs. 700-40-1100-50-1600.

N.P.A. admissible to medical graduates for the posts in the Institute of Medical Sciences only.

Other posts : As mentioned under respective posts.

1. **Principal** (One) (Mahila Mahavidyalaya) (FOR LADIES ONLY)
Grade : Rs. 1500-2500.

Qualifications
Essential

(1) A first or High Second Class Master's Degree in Science or Arts or an equivalent qualifications. (2) A Doctorate Degree or published work of a high standard in reputed Journals. (3) Not less than 10 years teaching experience in University or a Degree College.

Desirable : Adequate administrative experience in a responsible position in a College/University.

2. **Deputy Registrars** (B.H.U.)
Grade : Rs. 1100-50-1600.

Qualifications
Essential

(1) Graduate of a recognised University. (2) Atleast 5 years experience as Assistant Registrar or equivalent post in a University. (3) Intimate knowledge of University Administration / Academic / Educational Planning/Examinations and/or Development.

Desirable : (1) Master's Degree (2) Experience in Personnel Management (3) Good knowledge of service rules, accounts and audit work. (4) Adequate knowledge of Hindi.

Note

1. Preference will be given to Scheduled Caste/Scheduled Tribes candidates for one post, if otherwise suitable.
2. Those who have already applied timely in response to Advertisement No. 2/1983-84 are required to apply again on the new application form without application fee.

3. **Malviya Professor of Comparative Religion:** (One): (Deptt. of Philosophy) (Faculty of Arts)

Qualifications
Essential

An eminent scholar with published work of high quality, actively engaged in research. About ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

4. **Reader in Management Studies** (One) (Deptt. of Management Studies).

5. **Reader in Sanskrit** : (One) (Department of Sanskrit).

6. **Reader in Physics :** (One) (Deptt. of Physics).

7. **Reader in Geology :** (Spl. Mathematical Geology/Photogeology), (One), (Department of Geology) .

8. **Reader in Geography :** (One) (Spl. in Information and Data Processing and computer applications and Statistical Geosciences) (Deptt. of Geography).

9. **Reader in Geography :** (One) (Deptt. of Geography).

10. **Reader in Medicinal Chemistry:** (One) (Dept. of Medicinal Chemistry—Instt. of Medical Sciences).

Qualifications
Essential

Good academic record with a Doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years experience of teaching and/or research provided that atleast three of these years were as Lecturer or in an equivalent position. This condition may be relaxed in the case of candidates with outstanding record of teaching/research.

Explanation

For determining "good academic record" the following criteria shall be adopted:

(i) A candidate holding a Ph.D. Degree should possess atleast a second class Master's degree; or
(ii) A candidate without a Ph.D. degree should possess a high second class Master's Degree and second class in Bachelor's degree; or
(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

11. **Lecturer in Psychology :** (Two) (Mahila Mahavidyalaya).

12. **Lecturer in Chemistry (Physical):** (One) (Mahila Mahavidyalaya).

13. **Lecturer in Zoology** (Three) (Deptt. of Zoology).

14. **Lecturer in Geology :** (Two) (Deptt. of Geology).

15. **Lecturer in Medicinal Chemistry:** (Two) (Dept. of Medicinal Chemistry—Institute of Medical Sciences).

16. **Lecturer in Plant Physiology :** (One) (Spl. in Plant Biochemistry and applied Plant Physiology) (Instt. of Agricultural Sciences).

17. **Lecturer in Bengali :** (One) (Deptt. of Bengali).

18. **Lecturer in Philosophy :** (One) (Dept. of Philosophy).

19. **Lecturer in Indian Philosophy & Religion :** (One) (Deptt. of Philosophy).

20. **Lecturer in History :** (One) (Deptt. of History).

Qualifications

Essential

(a) A Doctorate's degree or research work of an equally high standard; and

(b) Good academic record with atleast second class (C in the seven point scale) Master's Degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Desirable

Preference shall be given to one having experience in Nucleic Acids/Protein Research for one of the posts of Lecturers in Zoology under Special Assistance Programme.

Having regard to the need for developing inter-disciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M.Phil. or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

Explanation

For determining "good academic record" the following criteria shall be adopted:

(i) A candidate holding a Ph.D. Degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. Degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

2. Persons having secured marks more than the mid-point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a University shall be deemed to have passed that examination in the high second class.

Note

1. Other things being equal preference will be given to women candidates—for the post of Lecturers in the Mahila Mahavidyalaya only.
2. In case of selection of women candidates—willingness to accept the hostel duties and residence in the Girl's Hostel and charge of extra-curricular activities such as Games, N.C.C., Canteen, N.S.S. etc.—for the post of Lecturers in the Mahila Mahavidyalaya only.
3. Those who have already applied timely in response to Advertisement No. 13/1982-83 are required to apply again on the new application form without application fee—for the post of Lecturer in Medicinal Chemistry only.

21. **Lecturer in Management Studies** (One) (Dept. of Management Studies)

Qualifications

Essential

A Master's Degree in Management or M. Tech. with first class on the condition that selected candidate will have to obtain a Doctor's Degree within a period of eight years from the date of appointment failing which he will not be able to earn future increments until he fulfils this requirement.

OR

(a) A Doctorate Degree or research work of an equally high standard; and

(b) Good academic record with atleast Second Class (C in the seven point scale) Master's Degree from an Indian University or an equivalent degree from a foreign University.

The degrees in (a) and (b) above may be in Psychology, Sociology, Statistics, Mathematics, Commerce or Economics.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M. Phil. or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

Explanation

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. Degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

2. Persons having secured marks more than the mid point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a University shall be deemed to have passed that examination in the high second class.

Note

Those who have already applied timely in response to Advertisement No. 3/1983-84 are required to apply again on the new application form without application fee.

22. **Lecturer in Sitar** (One) (Department of Instrumental Music)

Qualifications

Essential

(a) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject or an equivalent degree or diploma recognised by the University; and

(b) Two years research or professional experience or evidence of creative work and achievement in his field of specialisation or a combined research and professional experience of three years in the field as an artist of outstanding talent.

OR

A traditional or a professional artist with highly commendable professional achievement in the subject concerned.

Explanation

For determining "good academic record" the following criteria shall be adopted:

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree ; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

23. **Lady Lecturer in Physical Education** (One) (Deptt. of Physical Education)

Qualifications

Essential

(a) An M.Phil. degree or a recognised degree beyond Master's level or published work indicating the capacity of the candidate for independent/research wrrk; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in Physical Education from an Indian University or an equivalent degree from a foreign University.

Desirable

A Doctor's degree in a relevant subject or research work of an equally high standard.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a lecturer in a discipline other than Physical Education is required to be appointed in the Faculty of Physical Education, the qualifications prescribed for recruitment, to the post of lecturer in the parent discipline may be insisted upon.

Provided further that if a candidate possessing an M.Phil. degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record may be appointed provided he has done research work for atleast one year or has practical experience in a research laboratory/organisation on the condition that he will have to obtain M.Phil. degree or recognised degree beyond Master's degree or give evidence of research work of equivalent high standard within eight years of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

Explanation

For determining "good academic record" the following criteria shall be adopted:

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

2. Persons having secured marks more than the mid point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a university shall be deemed to having passed that examination in the high second class.

Note

Those who have already applied timely in response to Advertisement No. 3/1983-84 and No. 6/1983-84 are required to apply again on the new application form without application fee.

24. **Assistant Librarian** (One) (Instt. of Medical Sciences Library)

25. **Professional Junior** (One) (For Ladies only) (Mahila Mahavidyalaya)
Grade : Rs. 700-40-1100-50-1600.

Qualifications

Essential

(i) Good academic record with at least a high second class Master's degree in a subject other than Library Science. (ii) Master's degree in Library Science with first or high second class.

Note

1. Those who have already applied timely for the post of Assistant Librarian (I.M.S. Library) in response to Advertisement No. 3/1983-84 are required to apply again on the new application form without application fee.
2. Those who have already applied timely for the post of Professional Junior (Mahila Mahavidyalaya) in response to Advertisement No. 20/1980-81 and No. 13/1982-83 are required to apply again on the new application form without application fee.

26. **Electronic Maintenance Engineer:** (One) (Under Special Assistance Programme—Deptt. of Physics)

Grade : Rs. 700-40-900-EB-40-1100-50-1300.

Qualifications

Essential

First or Second Class Bachelor's degree in Electronics/Electrical/Instrumentation Engg. or M.Sc. in Physics with specialisation in Electronics and Experience of repairing Electronic instruments.

Desirable

1. M. Tech. degree. 2. Experience of maintenance and repair of scientific instruments.

27. **Professor of Dravyaguna** (One) (Instt. of Medical Sciences)

Qualifications

Essential

(1) A.M.S./A.B.M.S or equivalent basic qualification in Indian Medicine recognised by the University. (2) D.Ay. M./M.D.(Ay.)/Ph.D. or equivalent Postgraduate qualification in the subject. (3) About 10 years teaching experience in the subject in any recognised Post-graduate Institution/or 5 years teaching experience as Reader in the subject in any recognised Post-graduate Institution.

Desirable

(1) Ph.D. in the subject after M.D. (Ay.) (2) Original contribution and research publication in the subject in standard journals. (3) Good knowledge in Modern Medical Sciences and/or Sanskrit.

28. **Professor of General Medicine** (One) (Instt. of Medical Sciences)

Qualifications

Essential

(1) M.D. (Medicine)/M.D. (General Medicine) (2) Teaching experience as Reader in General Medicine for four years in a Medical College.

29. **Reader in Biophysics** (One) (Instt. of Medical Sciences)

Qualifications

Essential

(1) M.B.B.S. or equivalent qualification recognised by the M.C.I. (2) M.D. (Biophysics), Ph.D. (Biophysics), M.D. (Physiology) or M.D. (Biochemistry) with one year training in Biophysics. (3) Experience as Lecturer in Biophysics for 5 years in a Medical College.

Desirable

Research experience & publication.

30. **Reader in Neonatology & Perinatology** (One) (Deptt. of Paediatrics—Instt. of Medical Sciences)

Qualifications

Essential

(1) M.D. (Paediatrics) or equivalent qualification recognised by M.C.I. (2) Teaching experience as Lecturer for five years in a Medical College.

Note

Those who have already applied timely in response to Advertisement No. 3/1983-84 are required to apply again on the new application form without application fee.

31. **Reader in Education** (One) (Temporary likely to continue till the Scheme exists) (National Teacher's Training Centre—Instt. of Medical Sciences).

Qualifications

Essential

(1) A Doctorate Degree or published work of a high standard. (2) A first or second class Master's Degree in the subject or an equivalent qualification with Master's Degree in any other subject. (3) About 5 years experience of Post-Graduate teaching/research. (4) Experience of guiding research.

Desirable

(1) Experience of teaching in a Medical College. (2) Training in Education Technology as applicable to teaching of Medical teachers. (3) Training, Experience or Diploma in Health Education.

32. **Reader in Obstetrics & Gynaecology** (One) (Instt. of Medical Sciences)

Qualifications

Essential

(1) M.D. (Obst. & Gynaecology)/M.S. (Obst. & Gynaecology)/M.D. (Mid. & Gynaec.) / M.S. (Mid. & Gynaec.)/M.O. (2) Teaching experience as Lecturer in Obst. & Gynaecology for 5 years in a Medical College.

33. **Lecturer in Obstetrics & Gynaecology** (One) (Instt. of Medical Sciences)

Qualifications

Essential

(1) M.D. (Obst. & Gynaecology)/M.S. (Obst. & Gynaecology)/M.D. (Mid & Gynaecology)/M.S. (Mid. & Gynaecology)/M.O.

34. **Lecturer in Ophthalmology** (One) (Instt. of Medical Sciences)

Qualifications

Essential

(1) M.B.B.S. or equivalent qualification recognised by the Medical Council of India. (2) M.S. (Ophthalmology)/M.D. (Ophthalmology).

Desirable

Research publications in standard journals.

35. **Lecturer in Preventive & Social Medicine** (Two) (Instt. of Medical Sciences)

Qualifications

Essential

(1) M.B.B.S. or equivalent qualification recognised by the M.C.I. (2) M.D. (P.S.M.)/Community Medicine or M.D. (Medicine) with D.P.H.

Desirable

Research publication in the subject.

36. **Lecturer in Dental Surgery** (One) (Instt. of Medical Sciences)

Qualifications

Essential

(1) B.D.S. preferably with M.B.B.S

37. **Lecturer in Pathology** (Three) (Instt. of Medical Sciences)

Qualifications

Essential

M.D. (Pathology), M.D. (Pathology & Bacteriology), M.D. (Pathology with Bacteriology), Ph.D. (Pathology), D.Sc. (Pathology).

38. **Lecturer in Prasuti Tantra** (Bala Roga) (One) (Instt. of Medical Sciences)

Qualifications

Essential

(1) A.M.S./A.B.M.S. or an equivalent qualification in Indian Medicine recognised by the University. (2) D.Ay.M./M.D.(Ay.) or equivalent Post-Graduate qualification in the subject. (3) About three years teaching experience in a recognised institution as Demonstrator/Clinical Registrar or equivalent position in the subject.

Desirable

(1) Ph.D. in the subject. (2) Publications in the standard journals. (3) Good knowledge of Modern Medical Sciences and/or Sanskrit.

39. **Statistical Officer** (One) (Faculty of Indian Medicine—Institute of Medical Sciences)

Grade : Rs. 700-1300.

Qualifications

Essential

(1) Atleast Second Class Master's Degree in Statistics/Mathematics with Statistics as special paper. (2) Atleast 10 years working experience of Medical Statistics in any recognised Medical Institution.

Desirable

Teaching experience of Medical Statistics in any institution recognised by the Government.

40. **Matron** (One) (S.S. Hospital)

Grade : Rs. 700-1300

Qualifications

Essential

(1) B.Sc. (Nursing) from a recognised Institution. (2) Atleast 10 years experience in Nursing Service/Administration in a teaching Hospital.

41. **Professor of Electronics Engineering** (One) (Spl. in Digital Communication/Digital Signal Processing) (Institute of Technology)

Qualifications

Essential

(1) Doctorate Degree and/or published work of very high standard in the subject concerned. (2) A first or high second class Master's Degree in the subject concerned or any equivalent qualification. (3) About ten years experience in responsible position in teaching/research/industry. (4) Experience of having guided research work of high standard or evidence of original work in Design/Development etc.

Desirable

(1) Fellowship of professional organisations/Corporate Membership of learned societies. (2) Research publications in standard journals.

Note

Those who have obtained Doctor's Degree in the subject concerned will also be considered irrespective of the fact whether they have a Post-Graduate Degree in the subject or not.

42. **Reader in Electronics Engineering** (One) (Spl. in Digital Hardware) (Instt. of Technology)

43. **Reader in Electronics Engineering** (One) (Spl. in Power Electronics) (Instt. of Technology)

44. **Reader in Electrical Engineering** (One) (Spl. in Switch Gear and Protection/Power System Control) (Instt. of Technology).

Qualifications

Essential

(1) Doctorate Degree in the subject or published work of an equally high standard. (2) A first or high second class Master's Degree in the subject concerned or an equivalent qualification. (3) About five years experience in responsible position in teaching/research/industry.

Desirable

(1) Research publications in standard journals. (2) Membership of learned bodies and societies.

Note

Those who have obtained Doctor's Degree in the subject concerned will also be considered irrespective of the fact whether they have a Post-Graduate Degree in the subject or not.

INDIAN COUNCIL OF AGRICULTURAL RESEARCH : NEW DELHI

POST DOCTORAL FELLOWSHIP

1983-84

Applications are invited by the Indian Council of Agricultural Research for the award of Post-Doctoral Fellowship for research in any branch of Science related to Agriculture (including Agri. Engineering), Animal Sciences (including Dairy, Veterinary and Fisheries) and Home Science during 1983-84.

The main objective of the scheme is to maintain continuity of research interest of Ph.D. scholars for a reasonable period of time after they complete their Ph.D. degree programme. The fellows selected will receive a consolidated amount of Rs. 1300/- p.m. and a contingent grant of Rs. 4000/- p.a. The fellowship will be offered for a period of 2 years in the first instance with possibility of extension of one year.

Eligibility : Candidates who have completed Ph.D. degree during the period from 1.1.82 to 31.12.83 in any branch of Science related to Agriculture (including Agril. Engineering), Animal Sciences (including Vety. Dairying and Fisheries) and Home Science etc. only are eligible for these fellowships. He/She should be below the age of 45 years as on 31.12.1983. He/She should have also atleast one published research work to his/her credit and have already shown evidence of independent research work. The fellowships will be admissible to persons of Indian Nationality as defined in the constitution of India. The Post-Doctoral Fellowship will be tenable at Agricultural Universities and I.C.A.R. Institutes only. The candidates who are already in service should send their applications through proper channel.

Reservation: 15% and 5% of the fellowship are reserved for Scheduled Castes and Scheduled Tribes candidates respectively. However, if such candidates are not available, the fellowship will be treated as unreserved.

How to Apply: The application forms and the rules governing the award of fellowship can be obtained upto 15.2.84 from the **Section Officer (Education I Section), I.C.A.R., Krishi Bhavan, New Delhi-110001** by sending a self addressed envelope of the size of 23 cm x 10 cm.

Application forms complete in all respect duly supported by attested copies of the certificates/degree and list of papers published, should reach the Section Officer, Education I Section, I.C.A.R., Krishi Bhavan, New Delhi-110001 before **25.2.1984**.

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Editor :
M.S. RAMAMURTHY

Food Science & Technology Information Service
20 FEB 1984

UGC's Central Universities Panel Report

In the last two issues of University News parts of the summary of the main observations and recommendations contained in the UGC's Central Universities Panel Report were given. In the issue of University News dated January 23, 1984 some highlights from the first part carried in the earlier issue were given. In this issue we are giving highlights from the second part of the Report which was carried in our last issue. The third instalment of the summary is also given hereunder. The last instalment will appear in our issue dated February 8, 1984.

- After noting the general demands of karamcharis of Central Universities that have led to agitations and also noting that there had been a few cases where teachers had directly disrupted academic work and, after expressing the Committee's concern with the question of discipline of students it has suggested that :
  - Universities should frame rules (for which provision already exists in the Acts, Statutes, Ordinances) violation of which rules would amount to indiscipline.
  - Certain forms of agitations like gherao, camping inside boundaries of houses of teachers or officers, use of derogatory or abusive slogans, should be banned.
- The recommendations made regarding discipline should be applicable to teachers and karamcharis also.
- Expressing its agreement with the views represented to it that the relationship between students, teachers and the university has legal as well as moral issues involved in it and observing that it was necessary to "promote an atmosphere conducive to learning by preserving the relationship of respect for the teachers and university authority on the one hand and utmost kindness and generosity towards the students on the other", the committee has suggested that :
  - The civil courts interventions should be as sparing and as sensitive to the institutions as possible.
  - When a court hears academic or discipline cases against the university it be supported by a jury of academics drawn perhaps from other universities.
  - A provision should be made that writ litigations by students or employees should not fall within the purview of the civil courts. Government may consider the desirability of setting up special courts to hear expeditiously such cases or set up administrative tribunals for such matters.
- Provision may be made in the Acts and Statutes of universities to give statutory security of service to the teachers.
- Statutes of universities may lay down in clear terms the duties and responsibilities of teachers. (The duties of the teachers have been specified in the recommendations).
- Whenever need arises for taking action for breach of discipline the final decision or awarding of punishment may be recommended by a committee of three academics not belonging to the university.
- A person of very high credibility be appointed to examine individual grievances of students, teachers and karamcharis and propose to the Vice-Chancellor how a grievance could be removed. Such person should be appointed by the Visitor from a panel of names proposed by the Vice-Chancellor and term of office of the individual should be co-terminus with that of the Vice-Chancellor.

Author-Publisher Relation

Justice G.D. Khosla*

When an author has finished what he considers his better than ever masterpiece, he is inclined to heave a sigh of relief and satisfaction, and lean back to contemplate the manuscript lying in front of him. This, he hopes, will bring him recognition, glory, fame and, no doubt, the money he so badly needs.

But the manuscript before him is not a finished product, ready for the consumer market. It has travelled only a part, no doubt a substantial part, of the way on the conveyor belt that ends in the study of the bibliophile. For he must find a publisher, and make his equation with him. If he finds the wrong publisher or cannot establish a meaningful relationship with him, his literary child may be still-born. The likelihood is that the literary gynaecologist will blame the parent for engendering such a poor specimen and the parent will castigate the gynaecologist for his inept handling of case.

It may well be that the death of the book was unavoidable and beyond the control of the two participants in bringing to life the literary creation. On the other hand, the failure may have been due to the lack of co-operation and fruitful planning on the part of one or both.

The real point of drawing attention to this peculiar feature of book production is the importance of Author-Publisher relationship. This relationship must be imaginative, sincere, honest and creative, with a capacity for mutual give and take, a willingness to entertain suggestions, and a readiness on the part of each to help the other. This necessitates a mutual understanding and appreciation of each other's problems, difficulties and objectives.

Let me state these quite unabashedly, for to draw a cloak of hypocricy or professed virtue is to shelve and cloud the issues involved. That way the Author-Publisher relationship can be soured, or at any rate reduced to a state where there is suspicion, mistrust and hostility.

Let me take the author first, because I am one myself and as President of the Authors Guild of India, I have listened to many a tale of woe, genuine, imagined or born of self-deception. The authors, at any rate all those whom I have had the pleasure or the misfortune to meet and talk or want to see their work in print, displayed in bookshops and stalls, sold, talked about, reviewed in journals and periodicals and provide them with royalties, prizes, recognition and may be, yes, why not, immortality.

The publisher on the other hand, is a businessman. He works, learns his profession, makes an investment and labours for gain. Publishing is not a charitable undertaking. Its primary objective is not promulgation of art, literature and culture, but his choice of the profession is motivated by his genuine interest in literature, art, philosophy and what have you, and though he works for gain, he does advance the cause of art, culture, etc.

Though both author and publisher work for monetary gain, there is this little difference between their respective outlooks. The author is sometimes willing to pay the cost of publication for the joy of seeing his book in print—vanity publishing—the publisher never.

The relationship of author and publisher comes into being because of the identity of the subject matter they deal in, viz., a book or literary work. Neither can really do without the other. That being so, it is imperative that both must strive to establish and maintain cordial, co-operative and mutually rewarding relationship. I use the word strive advisedly for in human relations, all parties have to work hard. An attitude of laissez faire simply won't do. Neither can say: "It is up to him. Why should I bother?"

In my view, there should be a frequent if not continuous exchange of ideas, suggestions, schemes, between author and publisher to make the book a success commercially and, therefore, artistically, culturally and intellectually. It may be argued: How is this possible when as many as 16,000 or more New titles are published in the course of a year. There just isn't time and the personnel to accomplish this. My reply would be that books are printed to be sold, and the kind of rapport I have suggested will enhance the sales potential of the book, and therefore, time and energy must be found for it. Fewer titles with greater numbers of each sold will prove more rewarding both for the publisher and the author than the proliferation of titles and subjects half-heartedly promoted with poorer sales.

The publisher should, in consultation with the author, devise the publicity and sales strategy. Many publishers will turn up their noses at this suggestion. "What does an author know about publicity?",

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**Founder member and former President, Authors Guild of India, New Delhi.*

they will retort. "We are in the profession, and we should know." But you will be surprised that many authors, if given the chance, will make very rewarding suggestions. A friend of mine, not long ago, wrote a book. It was a good book. I had read it before it went to the publisher, and had greatly commended it. As soon as it was published, the author requested a number of newspapers to ask me to write about the book and on the subject matter he had dealt with. This proved to be excellent publicity, and the book was reprinted twice within a month. Another author who had written an art book with illustrations, was able to persuade a premier airline to make a bulk purchase of the book for giving presentation copies to their more valued patrons. I am not saying that every author has fruitful ideas about the best way of launching his book or that any particular author can be depended upon to devise publicity plans for each one of his books, and generally speaking, the publisher certainly knows far more about the methodology of publishing than any author. What I am pleading for is a closer relationship and greater collaboration between the two.

The jacket design is part of publicity tactics, and in this matter the author-publisher relationship can be made more meaningful. In the standard contract drafted by the Authors Guild of India and approved by the Federation of Indian Publishers, there is a clause 11 which provides for an author-publisher consultation in preparing the jacket design. Of my 18 books, some had attractive jackets and some not. But whenever I was consulted, and this happened, alas, in the case of four books only, the design finalised was not only attractive but was also more suitably related to the subject matter of the book. A bad jacket will not kill a good book, but a good one will certainly promote sales. The jacket is the first thing the would be buyer sees and is drawn by.

In the matter of royalties and payments, the publisher should be fair and prompt, and what is more important, he should appear to the author to be so. This may not be easy in the prevailing atmosphere of suspicion and mistrust not always unfounded. But generally speaking authors are not a breed given to disbelief and mistrust, and publishers can easily win their confidence by being frank and fair in their relationship with authors. And while I am on the subject of royalties, an advance to the author on the delivery of the manuscript is good business tactics and helps to establish a healthy and amicable relationship with the author. All foreign publishers do this, but only a few Indian publishers in some chosen cases agree to part with money in advance. The publisher should remember tnat when he accepts a manuscript, he has good reason, on the basis of professional assessment, to anticipate enough sales to cover the cost of printing and a modest advance of royalty. The author feels that he has delivered the goods and is entitled to receive some part at least of the price.

The British and American publishers make a practice of collecting all newspaper and magazine reviews of books they publish and sending the relevant cuttings to the author of each book. This is very morale boosting and makes the author happy and stimulates his creative glands for further activity. I suggest that all Indian publishers should have a machinery for giving their authors this very essential service.

One word, perhaps just more than one, to the authors. They too should give the publishers a fair deal, and not expect miracles to happen in this age of shortages, controls, rising prices and other impediments. Publishers do have difficulties and problems. They have often complained of less than fair dealing on the part of the authors—delayed manuscripts, plaigiarism, dealing with two publishers for the same work at the same time, carelessly edited works. An upright author who expects a fair deal should deal with his publisher fairly.

It is more rewarding and less troublesome to choose a good publisher and stick to him. I am afraid, I have not practised this myself. My eighteen books went to no less than eight publishers. I learnt the hard way. So, I say, the word of the Iranian poet,

Man na kardam shuma hazar bikuned.

Let me sum up briefly:

1. There should be closer and continuous collaboration in the Author-Publisher relationship, and each should strive to work for the common good, financial as well as cultural.
2. The publisher should boost the morale of the author, not by undeserved adulation but by a discerning choice of books and by intelligent exploitation of the intellectual potential of the author and his work. To this end, the payment of advance royalty, consultation regarding the design of the jacket, the practice of sending review cuttings to the author are some of the devices which will prove useful.
3. The author should not presume that every publisher is dishonest. The evidence of dishonesty is certainly not more than in any other field of Indian business activity. Let him for his part deal fairly with the publisher.
4. The author should choose a good publisher and deal with him as far as possible. ☐

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Book Development and Reading

Abul Hasan*

Book development and reading go hand in hand. Quite apart from the fact that reading is the mainstay of education, it is vital to the progress of the publishing industry in any country. The development of the reading habit and book publishing are so closely inter-related that any improvement in one is bound to have an immediate helpful effect on the other. The inter-relationship between the two is so obvious that it tends to be ignored. No wonder that it took the Western publishers some centuries to discover this obvious relationship. In the United States this realisation came about forty years ago when American publishers first started to work consciously for the development of reading habits.

Towards a Reading Society

It may be recalled that one of the themes identified for the promotion of books during the International Book Year 1972 was promotion of the reading habit. The latest proclamation on the subject was made by a world gathering of book experts which declared that "we seek a world in which books are more readily available to more people, and in which the ability to read and the will and desire to enjoy the fruits of reading are more widely sought by all societies. . . . We seek a world in which there are indeed books for all, but one also in which all can read and all accept books and reading as a necessary and desirable part of daily life. We look forward not merely to a literate world but towards a universal reading society."

Reading is important for self-improvement or fulfilment and national progress. Apart from enriching individual human life, it is a source of recreation and cultural identification. Reading also fosters better understanding between peoples of different nations and strengthens the desire for peace. The factors that affect reading are varied and complex. We shall discuss a few of them in the context of down-to-earth matters.

Ability and Facility to Read

When we talk of the reading habit we take two aspects for granted—the ability to read and the facility to read. The ability to read presupposes the establishment of a system of education which provides literacy to all. The facility to read implies, among other things, the establishment of a network of libraries within the reach of every citizen. For historical reasons, our country is still lagging behind in providing this ability and facility to a large majority of its people. However, we are endeavouring to make up the leeway as early as possible as would be evident from our Constitutional Directive to provide compulsory primary education to all children in the age-group 6-14. Unfortunately, despite all efforts, we have not been able to fulfil this commitment so far. Our deadline is 1990, now by which year we hope to cover all adult illiterates also in the age-group 15-36. As for the facility to read, we have some 60,000 libraries in the country besides 5000 specialised libraries attached to various Central and State Government Departments. We have also introduced certain innovative schemes for expansion of libraries, like book banks and the establishment of Raja Rammohun Roy National Library Foundation.

The Economic Problem

Whatever literacy and library facilities we have in India today, the problem of our reader goes much deeper. In terms of pages read it is estimated that the per capita annual rate in the world's leading publishing countries is around 2,000 pages, while it is only 32 pages in India. Even among our literate men and women, the reading habit is not much developed for economic reasons. Our potential reading public is handicapped by the lack of purchasing power and has often to make a Hobson's choice—the choice between a good book and a good meal. Even in our economically better-off States, books hardly figure in the housewife's budget. Except for religious books, textbooks and professional publications, we seldom spend money on books. We invite poets from all over for public recitals, but ironically display a lack of enthusiasm when it comes to buying their poetry in the form of a book.

It is not the fault of our readers if they are not able to buy books. Owing to escalating cost of book production, especially of paper, even ordinary books are slipping outside the reach of the general reader. The economic basis of our book industry has to undergo a thorough change before we can expect our readers to buy books. The answer lies in large printruns of paperbacks resulting in low unit cost within the means of the average reader. Here again we enter a vicious circle. Large printruns presuppose a large readership and large readership can be built up only by developing the reading habit.

Catch them Young

Enduring reading habits are best formed at a young age when the mind is most impressionable. Every home and school must provide facilities for reading to the children at a young age. Once the reading habit is established at the kindergarten stage, it is carried through the rest of one's life; if not, even the art of reading may be lost. For this reason and also because the number capable of reading is always greater among young people everywhere, books for children are considered to be the most important category of books after textbooks. A good juvenile publication—of fiction or fantasy, of facts or formula—that really catches the child's interest and leads him on to voluntary reading can be one of the least expensive and most effective tools of learning and a very simple means of socializing the child and developing his personality. In order to be attractive and interesting, children's books must be available in the child's mother tongue and based on his actual needs and experience. As one international organisation has put it: "Let us give our children the books they need today for a better world tomorrow."

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* *Deputy Educational Adviser, Ministry of Education & Culture, New Delhi.*

Unfortunately there is a shortage of meaningful children's literature in India. Low literacy, high production cost, low purchasing power and a disorganised market combine to make the publishing of children's books an uneconomic proposition in our country. Although we have some excellent children's authors and illustrators and some of our publishers are doing pioneering work in the field, they are not fully integrated into the economic circuit of the Indian book industry for want of adequate outlets and incentives. A breakthrough in this field does not appear feasible without strong government support. Besides encouraging local authors, illustrators and publishers in every possible way, the most important step would be to ensure a wide market for children's books through institutional buying. Even in developed countries like the UK and the USA about 75 per cent of the total turnover of juvenile literature is accounted for by schools and libraries. Special funds have to be created for the purchase of juvenile publications including magazines by school libraries and public libraries to convert a genuine need into an effective demand.

It must be remembered that availability of suitable children's literature is essential to achieve our target of literacy and universal primary education. The absence of such literature causes a high percentage of school drop-outs to relapse into illiteracy and lose all interest in reading. We have also to consider whether foreign children's books should not be removed from the OGL list. They seem to have achieved a regular flow because of a safer market, although such books have not always helped our children to identify strongly with their own culture and language. It is gratifying to note that the National Council of Educational Research and Training has recently announced a project under which meaningful and relevant reading kits will be supplied to our school children.

Gifting Books

Giving packets of good books to the child as a gift on festive occasions like a birthday, New Year's Day and Christmas is another good tradition which promotes and sustains the reading habit in the child. Once the child becomes interested in books, he would be excited on receiving books on such occasions and would like to develop a library of his own. In India, the practice of gifting books is not very much in vogue. In a survey carried out by the National Books Trust on the purchasing pattern of children books during the 1978 World Book Fair, the purchase of books for giving gifts received a very poor rating. A packet of selected books for the summer vacation should be most welcome to our child. There could be other occasions also for gifting books. I am reminded of a Japanese friend who gave 500 books to his daughter as part of her dowry and was not surprised to know that she valued this gift more than any other.

Book Clubs

Earlier I referred to inexpensive popular books which could play a vital role in the development of reading in our country. This bring us to the Home Library or the Book Club Movement. Apart from its economic advantage, the movement brings the village reader on par with the urban reader. This is important because a majority of our people live in villages which have no book shops. The fear that such schemes of selling books by mail will damage the retail book trade is unfounded. On the contrary, book clubs breed a new clientele of book readers, who will eventually turn up as customers in the retail book-shop.

Unfortunately, we have not more than half-a-dozen book clubs in India with a total enrolment of about 50,000. Considering the size and population of our country, this is but the appearance of a few stars in the sky. We hope that many more book clubs will be started soon, for which the initiative should come from publishers. Readers can also start Book Lovers' Associations which may organise Literary evenings, Meet-the-Author sessions and exchange of literature. A particularly successful example of this type of activity may be found in the Book Lover's Association of the USSR.

On its part, government could also facilitate the free flow of books by devising special concessional rates for book-post packets. There are already substantial postal concessions for book packets. However, there is a special case of books being exempted whenever there is an increase in postal rates.

Book Markets

An important area in which local authorities can help to foster the reading habit is the establishment of book markets in all important towns. While we make provision for vegetable markets, grain markets, cloth markets, etc. no town in the country has, as yet, a real book market. Even in a place like New Delhi, there is not a single book shop where publications in regional languages may be readily available. Indeed a lover of books has to go from shop to shop in order to buy books of his interest. Here I am reminded of an American publishing expert who once remarked that books were not sold but bought in India.

The proposed book market could be constructed by government as a large covered hall with a number of stalls—at least one for each Indian language. To begin with, these stalls could be given on subsidized rent. An organisation like the National Book Development Council could be the coordinating agency to run the market and to supervise it. The book market would be an ideal rendezvous for book lovers for browsing. Such a market can also be a centre for national integration, bringing under one roof publications in all the major Indian languages. It could also develop into an attractive cultural and educational centre.

Book Kiosks

Another step which may be taken to popularise books and to promote reading is to set up book kiosks at vital points in collaboration with the agencies concerned e.g., at petrol pumps, hospitals, railway stations and post offices and in places of tourist interest. This is done with success in foreign countries and there is no reason why it should not work in India where such devices are conspicuous by their absence. It can be a mutually advantageous arrangements under which books and show cases are supplied by publishers and space for display is provided by the cooperating agency.

Book Journals

Book journals are a necessary means of promoting the reading habit and catering to the special need of the adult book reader. We have only two book trade journals in English viz. the *Indian Publisher & Bookseller*, Bombay, and the *Indian Book Industry*, New Delhi. There is also a fortnightly journal *The Book Chronicle* published from New Delhi which carries book reviews of some selected titles. Then we have the newsletters published by the book industry federations and a quarterly journal *The Indian Author* published by the Authors Guild of India. Besides, some of our leading publishers also bring out their own house journals. This service is available to some extent for our books in English. The real need is to extend the facilities to all the Indian language publications. Book trade journals are being published in some of our regional languages. The State Publishers and Booksellers Associations are ideally suited to compile and release such journals in the respective Indian languages.

Development of Libraries

It is necessary to set up a network of libraries throughout the country if we want to attain a fair degree of readership. The fact that about three-fourths of the total turnover of the book trade is absorbed by institutional purchases lends further support to this need. Libraries play an important role even for their non-users. By promoting large editions of books at far lower cost per unit, they enable publishers to reach a large market of individual purchasers and thus help the non-library readers also.

Children's libraries and school libraries should receive a high priority in any programme of library development. A sample survey conducted by the Ministry of Education some years ago revealed that the stock of books in our primary school libraries was outmoded and unsuitable for children and that a student in our primary schools reads on an average not more than one title per year outside the syllabus. According to one school of thought, educational institutions should insist on compulsory library hours for every student per week. In order that students make an intelligent use of the library, they should be guided by expert library staff and should have direct access to books. All public libraries should have a special children's corner with lending services. If possible, a three-dimensional visual display of scenes from well-known children's stories may be arranged in the children's section. This will not only add to the attractiveness of the library as a whole but will also tempt the child to read the book.

Shortage of funds and skilled staff is a perennial problem with the library system in our country. Imposing a library cess and raising non-governmental sources are some of the measures taken to finance library services. Other steps to spearhead the library movement may include introduction of book mobiles and rotating book boxes specially in rural areas, provision of adequate training facilities for librarians, fixing a certain portion of the book buying budget for the purchase of indigenous books, making purchases as far as possible from local booksellers, and provision of a documentation service and audio-visual equipment in as many libraries as possible.

Reading Surveys and Investigations

One of the targets of the World Congress on Books was the creation of a reading environment in all types and at all levels of society. Although the book remains one of our great resources, "reading is not as essential to the human system as eating or sleeping." Out of about 36 per cent of our population which is capable of reading, there is a high percentage of the reluctant reader or the literate non-reader. For a variety of reasons our country does not seem to have a book culture or a reading climate. A reading environment is possible when the right book can be provided for the right person at the right time and place.

Our publishers and book promoters should give serious attention to investigation and research into the reading habits and tastes of our people and provide the reading materials not only suited to their requirements but also helpful in improving their reading tastes. A survey of the reading habits of the university students in Delhi carried out some years ago identified fiction, mystery, romance and adventure as popular themes with the students most of whom hailed from urban areas. On the contrary, a Unesco sponsored survey on the supply of books to rural Asia found almanaces and mythological epics popular in Indian villages. These surveys are not only old but also few and far between. There is an obvious need to conduct intensive investigation to identify the reading material that is needed at different levels of the reading skills ranging from the child reader to the adult neoliterate and extending to students and inveterate readers, and then take necessary steps to provide and distribute it effectively.

Use of the Mass Media

In a judicious communication policy, the mass media far from being superior rivals to books, can be properly utilised to serve the cause of book development. Radio and Television are being used as an avenue to promote books and reading in many countries. Programmes like Recent Book Releases, Meet the Author, Story Telling Sessions, Poetry Recitations, Literary Symposia and the like, if sponsored on TV and Radio, can generate lot of interest in reading.

The print media is yet another means to publicise books. Book reviews are a very important source of information about books which does not seem to have been properly exploited in our country. Editors of newspapers and periodicals—big and small—could be persuaded to allocate more space to book reviews which should be published frequently and more timely. Indeed, the newspapers and the periodical press should be prevailed upon to charge concessional advertisement rates for books.

Book Fairs and Festivals

Book Weeks, Book Fairs and special book releases are also important. They not only provide information about books but also help in fostering bookmindedness in the people. They lend prestige to the book as a commodity and create the kind of psychological atmosphere which is vital to the development of the reading habit. The National Book Trust regularly organises these fairs on an international, national as well as regional basis. It is gratifying to note that of late the Trust has extended the fairs to semi-urban levels also. In furtherance of its objective to make people bookminded, the Trust has purchased a mobile display-cum-sale van which covers rural areas around Delhi. As part of its silver jubilee celebrations last years, the Trust organised a number of reading promotion activities including a Children's Book Festival in New Delhi, a National Book Week and lectures by eminent people on "Books that have influenced me". Some private organisations and professional book associations have also started organising book fairs and festivals. Educational institutions could also consider making such efforts to promote reading among students.

Reading for Pleasure

When I refer to promoting the reading habit of our students, I mean the reading that is done not as drudgery for examination, but as a hobby for pleasure. Unless reading develops as an automatic activity, outside and unrelated to classroom, it can make little contribution to the intellectual growth of the student and hence to his overall personality. According to a survey made some time back, a typical Indian student reads for less than an hour outside the class attendance, compared to four to five hours of reading by his counterpart in the United States of America or the USSR.

In a symposium organised by a progressive secondary school in New Delhi as part of its Book Week programme, some student speakers bluntly remarked that they had no time to read. According to them, the syllabus was so crowded and the examination demanded so much concentration on textbooks, that there was hardly any time to read outside the prescribed textbooks. A publisher who also participated in the symposium made a startling confession. He said that publishers were often fatigued by professional commercial reading and did not therefore read outside the office hours.

Whether they are themselves readers or not, publishers and booksellers must realise, for their own long-term welfare, the importance of the reading habit. Since reading is the mainstay of publishing, all possible steps should be taken to promote reading as a pleasurable and useful experience. Most of the measures suggested have to be taken either by parents or by teachers or by publishers or by government. But they are basic for the expansion of the book industry and trade in India. The success of these measures will no doubt depend on the cooperation of all concerned—parents, teachers, educationists, librarians, publishers, booksellers, government and, last but not the least, the Indian children. □

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The Basic Problems in Publishing

Amrik Singh*

A decade ago, when I was a member of a committee appointed by the UGC that dealt with the development of libraries, I introduced a resolution which unfortunately could not be considered. The proposal put forward was that every university and college should pay up for purchase of library books within 45 days unless there were compelling reasons to the contrary. It so happened that my term ran out and as far as I know the issue was not taken up.

I sometimes wonder to myself what if the proposal had been accepted. It certainly could not have taken care of the crisis in book publishing that broke out in the late seventies. But it might have helped. The basic problems in publishing are two-fold. One is the shortage of capital and the other is the long term credit which has to be given to educational institutions when books are supplied to them. The prevalent mode of payments, as should be apparent, aggravates the first problem.

Almost every publishing house is every now and then faced with the problem of what is called the problem of liquidity. Paper merchants, book binders, printers and every body else has to be paid in cash. But when books are sold they bring cash after a long lapse of time. In between the publisher has no choice except to get advance from the bank or resort to some other technique of financing. In either case his situation of scarcity does not improve. The proposal outlined above could have helped the situation somewhat but it could not have taken care of the basic problem.

The basic problem remains that capital in publishing industry is scarce and even that scarce capital does not rotate as rapidly as it does in other forms of business. Take magazine publishing for instance. This is a relevant example because magazine publishing is also a form of publishing and in any case some of the latest trend in magazine publishing have made certain kinds of books surplus and consequently unwanted.

A magazine receives the subscriptions in advance. This provides the necessary capital. A little more capital added to it and the magazine is in business. Over-arching everything of course is the quality of the reading matter. If one magazine can outsell another, it is seldom for lack of funds. It is usually for other reasons, including readability.

Gestation Period

In the case of books the gestation period is long and the return on the capital invested takes equally long to mature. Every publisher has to invest on what are called overheads and then the printing and publishing of the book. It is only after 40-50% of the copies have been sold that he starts getting some kind of a profit. This is unlike what happens in most other forms of business. One reason why big businesss in India has seldom felt interested in publishing is because the returns are low and the rate of return is unusually slow.

It is open to anybody to raise the question: how is it that publishing does better in other countries and not in India. There are two important reasons for it. One reason is the fact that we in India operate through a multiplicity of languages whereas in most other countries this is not so. This simple fact reduces the size of the market therefore and to that extent reduces the scale of the enterprise.

The second reason is the fact that in most other countries where publishing is strong, the whole sector of educational publishing is available to the publishing industry. The State hardly does any publishing. The entire publishing is done by private enterprise. Though profits are marginal in the case of educational books, the sales are sure and quick. Whatever is invested returns with profit added to it within a matter of months, if not weeks. A good publisher in another country therefore likes to maintain a balance between general publishing and educational publishing. He makes his bread from educational publishing and his jam from general publishing.

Educational Publishing

In India, for reasons into which it is not necessary to go, the situation is radically different. Educational publishing at the school level is more or less beyond the range of our publishers. At the college level the field is open and quite a few publishers have got immense mileage out of it. But the market is on the whole rather limited and the opportunities are therefore equally limited.

The best that Indian publishers can hope for in the years to come is some marginal share in the prescription and sale of textbooks. The situation will therefore continue to be difficult. This is not a counsel of despair. On the contrary, it is being said in recognition of what is happening and what is likely to happen. Even within these limited parameters there are things that can be done and indeed require to be done. To put them in the order of priority:

(1) The UGC should be more consistent as well as predictable in regard to its policy towards university and college libraries. At the moment the policy is framed more or less from year to year. Publishing in order to be effective requires a lead period of one to two

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*Former Secretary, AIU,
New Delhi.

years before a book is conceived, written and actually published. The existing uncertainty should therefore be put an end to.

(2) To look up to the UGC alone can be frustrating as well as self-defeating. Except for seven universities, all others are run by the States. Then there are approximately 5000 colleges. The bulk of the grant comes to these institutions from the State exchequer. At the moment the States do not have any well defined policy with regard to libraries. One of the things that both the academics and the publishers should do is to work on this front so that certain norms get established.

Lack of Capital

(3) The basic problem of the industry is lack of capital. This can be met in two ways. One is by State action and the other is by amending the procedures in such a way that payments are not unnecessarily held up and there is better cash flow. The State intervention in turn can take two forms. One is to establish a Book Finance Corporation and the other is to so arrange things that publishing is treated as an industry which qualifies for bank advances. At the moment while a publisher can get an advance against blank paper, the moment that paper is printed upon and converted into a book all credit is stopped.

Secondly, while this kind of State intervention can play a major role, a minor role can also be played by changing the existing procedures of payment. The proposal made to the UGC committee a decade ago may be resurrected and given a fresh look. In any case a little more awareness on the part of everyone concerned can ease the financial situation for publishers. This is something that requires to be done in the interests of better circulation of books.

(4) One of the things that has wrecked the book trade is the publishers also acting as booksellers. There were certain historical reasons for it. A state of anarchy within the industry was however equally responsible for it. Here nobody other than the publishers can help themselves.

(5) Within a decade the price of paper has gone up by 600%. As should be evident, this is not entirely because of the inflationary situation. It is also because of shortage of paper. The country has lived with this shortage for a couple of decades, if not more. One can live with it for another decade or so also, provided there is the assurance that after that the situation would improve. Unfortunately there are no signs even of that.

Cost of Inputs

The reference to the high cost of paper is indirectly a reference to the high cost of inputs into publishing. The price of everything has been rising. The price of books therefore is bound to rise. As far as most people are concerned, books are not an item of necessity and to that extent individual book buying goes down. The country is thus caught in a vicious circle and no one knows how to get out of it. The only two responses that anyone can make are that there should be a better library system and the cost of inputs should be brought down. How these two things are to be done are matters that require to be examined further.

There is so much more that can be said on the subject but then one cannot say everything on an occasion like this. The quality of publishing is more or less directly determined by the quality of academic life in a country. Something unusual has been happening however in India for the last few decades. While the quality of education has not improved all along the line, in certain areas it has done remarkably well. Somehow it is those very people who represent the high peaks of quality in the system who write books, including textbooks. If what they write gets projected properly, they get a good feedback and they feel encouraged to write more and on a higher plane of scholarship and sophistication.

It is the quality of the feedback however which is poor and invariably unexciting. This is because the rest of the academics either do not take notice of what their more accomplished and hardworking colleagues are doing or because their eyes are focussed on what is being done in other countries and they have nothing but disdain for what happens around them. In either case the situation requires to be changed.

Given the constraints, the Indian publishers have not performed too badly. They have shown imagination, enterprise and an eagerness to be self-reliant. These are positive qualities which need to be put to good use. Unfortunately the patronage of the State has been halting as well as far from adequate with the result that their full potential has not been realised.

In certain cases the role of the State has been positively obstructive. A good deal of the State effort has gone into publishing by State agencies. Exceptions apart, such a policy is counter-productive. The ideal combination is that the State should provide the resources and the enterprise should come from the private sector. Once this combination can be ensured there would be a kind of breakthrough, and that is what one is waiting for. □

(*Courtesy : Indian Book Chronicle*)

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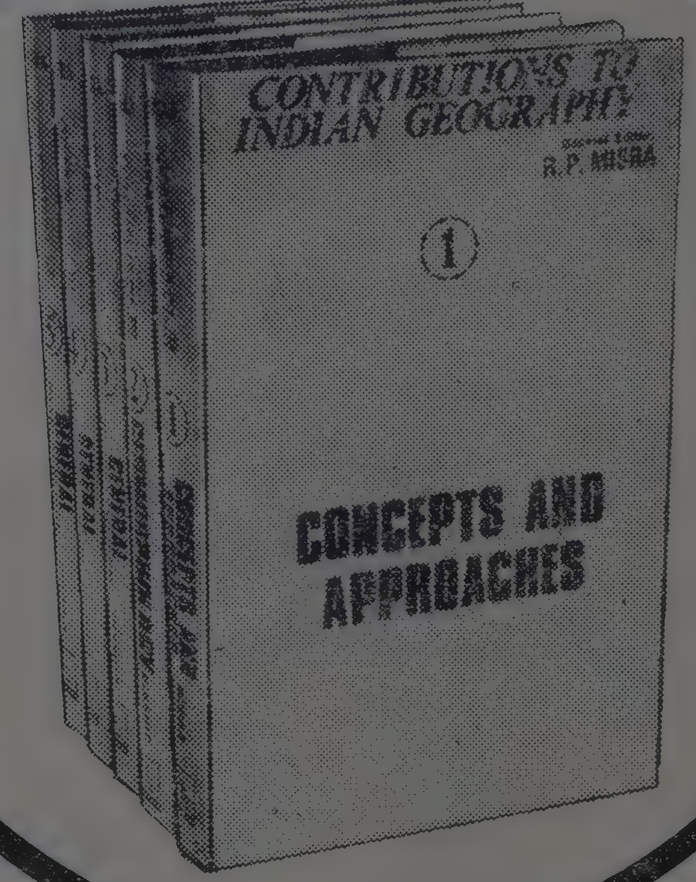
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Promotion, Marketing & Distribution of Bool

O.P. Ghai*

Books have several roles to play. The social usefulness of books as the principal means of advancing education, science and culture is recognised by those who are professionally, creatively and occupationally involved in books. While books for children serve an educational purpose at a crucial impressionable and formative age, the school or university books are functional tools specifically adopted to serve an educational purpose.

The publication of a large number of books as a result of the rapid spread of literacy in a country of India's dimensions and population offers to the publishing industry material and social opportunities and responsibilities. There is a close nexus between the publishing activities of a country and the pace of its development and socio-economic progress. In fact, no national policy can be successful without a national policy on books and publishing.

Although the reading habit starts at an early age, publishers can, with proper efforts in promotion, marketing and distribution of books help create the reading habit among the older people. For this purpose readers have to be lured to the world of books. But with a weak publishing industry with a general print run of 1000 no method of promotion, marketing or distribution can help in the sale of a book.

The expansion of education during the last few decades, the large outlays and expenditure of funds by the government, the increasing thirst for knowledge are indicative of the growth pattern. In this context a closer contact between publishers and customers and the promotional activities carried by the individual or combined efforts of publishers to meet the demands of the ever expanding market for books will surely pay dividends. But it is difficult to cover such a market in a country like India with all its complexities and diversities of language.

Promotion is one of the most important functions of book publishing management. A book is of little use if it remains in warehouses, however well it may be written, edited or produced. As a matter of fact, the proper promotion of a book is a duty that the publisher owes to the author who invests time and effort in creating the manuscript, to the reading public for whom it is published, and to himself for he must make a profit to keep his enterprise going. Having published the book the publisher should undertake sufficient publicity and promotion to bring the book to the notice of the right kind of public.

Sales promotion in its wider connotation cove a variety of media, e.g., advertising, publicity thr ugh folders, issuing catalogues, trade circulars, d play materials and securing of favourable reviews people and journals whose opinion carry weig with the readers.

Publicity is generally organised in three stages:

1. Pre-publication publicity;
2. On publication publicity; and
3. Post publication publicity

The mailing of promotional literature to indiv duals in the subject of their interest, apprising the of new editions and forthcoming publications is a important part of promotion.

Press publicity is an important tool of bringin different publications to the attention of potenti customers. Though all books do not justify adve tising in popular magazines, newspapers or the ele tronic media, yet this promotional aspect must b pursued. Book reviews get little attention unless th book is controversial or of topical nature.

The display of books for all tastes and particularly in regional languages at book exhibitions generates tremendous interest among the public. N other form of display can attract as large a numbe of potential customers as one exhibition. The boo fairs held regularly to coincide with the opening o academic sessions in urban areas become importan events for local and neighbouring areas.

Libraries have a unique share in book promotio by the improvement of accessibility to books through adequate bibliographic coverage. Quick, accurate and exhaustive information on books is th librarian's main objective.

A well developed library system caters to th needs of individual readers. A strong and effectiv library movement in the country will help in meetin the objective of making available books to all. Th strength and expansion of the publishing industr in the developed countries owes considerably to th strong library movement. In making books mor widely accessible, libraries form an integral part o education at all levels of formal and nonforma learning. It is also seen that there is a reciproca impact of libraries on book shops or vice versa They build each others readership. The same readers buy and borrow books. The same non-reader avoid bookshops and libraries.

The best way to attract children towards book is to have a corner in every bookshop devoted to the imaginative display of children's books and paperbacks.

**Chairman : Sterling Publishers (P) Ltd*
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Another aspect of promotion concerns the preparation of catalogues, brochures and checklists. This involves great expenditure. Membership lists of professional societies are not easy to get. Developing one's own mailing list takes time and is expensive. Catalogues and brochures may often fail to reach the addresses. Together with this, the high postal charges make returns through promotion meagre. In such cases it is worthwhile to resort to cooperative promotion as an effective way of reaching a large audience at low cost. The small publishers stand to gain much through cooperative endeavour.

Marketing & Distribution: Although the publishing industry produces a variety of books for different categories of readers, they are sold through the same wholesaler and retail bookseller. It is now felt that different categories of books require to be marketed in different ways. In order to reach the far flung corners of the country, it is necessary to have recourse to traditional and non-traditional methods of marketing.

After the publisher has published and promoted the book, the greatest single contributory factor in its success lies in making it available throughout the country. This can be possible only with the active support of an efficient network of wholesalers and retail booksellers. Just as the publisher is the vital link between the author and the ultimate customer, similarly the distributor is an essential link between the publisher and the bookseller.

Since the basic idea behind publishing is the wider exposure of books, the large network of distribution is important. A dynamic distributor, who buys bulk quantities of individual titles from the publisher at special terms and then supplies to the retail booksellers at the standard discount retaining a minimum for himself, must have an efficient marketing organisation and requisite selling network. He should have the staff and capacity to stock large quantities of titles so that no time is lost in meeting the demand generated through promotion and publicity by the publisher.

Wholesalers play an important part in stimulating the circulation of books. They provide the retailer with a single source for obtaining books issued by different publishers. The publishers, on the other hand, have the advantage of making bulk sales to the wholesalers instead of having to deal separately with each retailer on every sale. The wholesaler is also a part financer of the book trade because the period for which he receives books on credit from the publishers is often less than the time taken in obtaining payment from the retailer. As such the functions of the wholesaler are — stocking, financing, trade promotion and widespread sales — on a subjective professional basis.

The bookseller remains the mainstay of the book trade. He maintains a constant supply of volumes on his premises and collects the sales proceeds that support the book trade. His bookshop also provides service for the reader who buys an impulse and place where potential buyers may browse.

Since few bookshops are found in most towns and cities and there is also a physical limitation in stocking everything published, it is necessary that books be taken to the readers doorstep. As everyone is attracted by the special offers from manufacturers of consumer items, books can also be offered at special prices.

Book Clubs are the main method of distribution outside the bookshops and libraries. They are effective means of carrying books to readers in distant places or rural habitations with no retail outlets. The publisher, assured of minimum sales, can afford to give discount to the reader in the form of an extra book. The subscriber, who commits a certain sum of money, is supplied a catalogue of books generally paperbacks with popular reading material, from which he chooses titles that interest him. The reader gets ths books post free.

The value of book clubs is evident for certain types of readers — those who prefer to have their books delivered at home or whose choice is narrowed to a relatively restricted selection of literary or professional titles.

To enable the book club movement to operate on a large scale and to encourage bookselling by mail, it is imperative that postal rates for books should be low. India has provided some concessions in this regard, but they are negligible.

The efforts to produce suitable reading material are nullified in the absence of a proper distribution net work. Book distribution is the most important operation which does not appear to have received the attention it deserves. "The book trade in most developing countries of Asia", according to a UNESCO study, "is characterized by inadequate distribution channels, unrealistic discount structures, ad hoc trade practices, insufficient promotion and bibliographical tools....In short the whole layer of book distribution is disorganised and unsystematic".

To sum up, I would say that in the absence of adequate number of book shops and their concentration in cities and large towns, unconventional channels should be utilized for retailing books to provide new outlets. These can be post-offices, railway book stalls, petrol pumps, community project centres, airports, tourist spots, stationery shops etc. If the retail trade is to survive, publishers should also resist the temptation to supply books direct to libraries and institutions. In order to remove the ills and improve on the functioning of the trade channels, it will be worthwhile to standardise trading practices all over the country by adopting identical policies of discount, credit, returns and other facilities. □

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Publishing in the Public Sector

V.S. Gupta*

Publishing in India since independence has made rapid strides. Enormous amounts of funds invested in education and development, increase in the total number of literate persons, literature needed by the government agencies for getting across the message of improved agriculture, social equality, family welfare and planned economic development—all these factors have contributed to the massive Indian out-turn of publishing.

Among developing countries India has one of the largest publishing industries, making it the seventh country in the world in terms of the total number of titles produced globally, and after USA and UK, the third country in English language publishing. Notwithstanding the comparatively rosy picture that these statistics tend to present, the fact remains that India has one of the lowest rates of books per million of population, which is only 27 as against 535 of Europe and 50 for Asia taken as a whole, and 150 representing the world average.

Public Sector—Largest Publishing Network

The largest single publishing agency in India has been the public sector. The Government, through its ministries and departments at the centre and the states, and through government sponsored research institutes, brings out a large number of books, pamphlets, reports, bulletins, monographs, etc. Several Universities, Boards of Education, State language departments, academies are also engaged in publishing. Besides bringing out text books, they also publish learned works, research dissertations, journals and house-magazines. During the last decade, every State established at least one agricultural university. These agricultural universities invariably bring out considerable amount of extension literature in the form of magazines, booklets, folders, for wide distribution amongst farmers. In addition, various government sponsored research institutes such as Indian Council of Agricultural Research, Council for Scientific and Industrial Research, Indian Council for Medical Research, issue scientific and scholarly publications.

NCERT

Public sector in India emerged as a leading partner in publishing with the nationalisation of school level text books immediately after independence. The National Council of Educational Research and Training (NCERT) was set up to prepare model text books, handbooks for teachers and other educational material. Since there has been a growing demand for standard text books, the Council has gone into large scale publishing as against prototype designing. The Council produces several types of publications including text books and teachers' manuals, supplementary reading material, yearbooks, research monographs and educational journals. The Council has also brought out a few reprint editions of foreign books, mostly on science subjects. The NCERT also provides guidance to state directorates of education, who publish their own text books at state level. While there has been some criticism of the text book publishing by the NCERT and the state directorates of education, like long delays, substandard production, some wasteful practices; the programme has been fairy satisfactory.

Department of Publications

The Department of Publications, in the Ministry of Works and Housing, is the second largest publisher, stockist, distributor and seller of government publications in the world. It handles about 45,000 titles including 35 periodicals and Gazette of India. The Department sells publications worth two crores annually. It is the publisher of all sorts of saleable publications of the ministries and departments, their attached and subordinate offices, public sector undertakings and army publications. The activities of the Department have expanded considerably in the context of various reports, Statistics and other important publications brought out by the government departments and the Planning Commission. According to the Controller of Publications, the chief of the organisation; the Directorate is the second largest publisher and stockist of government publications in the world, next only to Her Majesty's Stationery Office, London.

However, there are certain serious inadequacies in the over-all working of the Department. The sales net-work is weak. Government publications are rather difficult to get. There is at times serious time lag between the handing in of a manuscript, its compilation and editing, and its final availability as publication for general sale. By the time the publication is available, its statistics may have become outdated, or information might have become available through other sources. In any case, general experience has been that search for government publications is time consuming and sometimes frustrating, as they are not freely available, and particularly so, in moffusil towns.

There has also been public criticism of the Department having huge accumulated stocks of unsold publications.

There is apparently urgent need of streamlining the procedures regarding publicity, marketing and accessibility of publications with in the easy reach of potential customers.

National Book Trust

The establishment of National Book Trust (NBT) is an event of major significance in the field of publishing in the country. A brain child of Jawaharlal

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Assistant Director of Publications, Haryana Agricultural University, Hissar.

Nehru, the Trust was established in 1957. The thrust of its publishing programmes is to make books of educational and cultural value available to general reader at low price. The Trust was required to publish Indian classics, translations of outstanding foreign works, translations of outstanding creative writing from Indian Languages into the others as also making available contemporary works of Indian authors in the field of education, science, art, philosophy and culture. The NBT also has a book subsidy programme for University level text books. It is intended to provide low-priced standard educational material, in the form of text books or supplementary reading for University students.

The Trust is engaged in activities like undertaking surveys about literacy and reading habits, fostering book mindedness and rural publishing. During the past decade it has taken to promotional activities in a big way. The NBT has so far organised five World Book Fairs, the Sixth New Delhi World Book Fair, being scheduled from 4-14 February 1984. These World Book Fairs are held biennially, and the year between sees a National Book Fair being organised in one of the major cities of the country. The NBT has been organising regional exhibitions and participating in exhibitions abroad. It also organises Writer's Camps, Workshops for translators, writers and illustrators of children's books and book publishing editors. It has been hosting International Seminars on specific problems of publishing and the book trade to coincide with the biennial features of the World Book Fairs. Some of the subjects on which International Seminars have been held are: Books for Millions (1972), World Publishing in the Eighties (1976), Educational Publishing in the Developing countries (1978), Publishing for rural areas in developing countries (1980), Books for all at low cost (1982). The theme for the 1984 international seminar is: Bookbinding techniques in developing countries.

The publishing activity of NBT encompasses ten broad services including: India—The Land and the People, National Biography, World of Today, Young India Library, Nehru Bal Pustakalya for children; Adan Pradan series. Books brought out in the Nehru Bal Pustakalya for children series have been really popular.

Drawbacks

Publishing in the public sector in India suffers from one uniform drawback, whichever the oranisation may be; lack of adequate sales network, and huge stocks of accumulated published material. Some of the University publishing houses, which are in no way constrained by way of lack of finances or facilities, are no better in this respect.

The public sector publishing will be seriously hampered in its onward progress; if this basic drawback is not remedied. notwithstanding the positive and beneficial role it has been playing in creating a general climate of book mindedness and making books available at low cost to the reading public. ☐

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Unesco Seminar on Cultural Implications of Communication Technology

In view of the urgent need to come to grip with the impact of communication technology on social, cultural and economic aspects of human life universally and specific reference to the developing countries of the South Asian Region, a meeting of specialists of many cogonate disciplines was convened in Poona to discuss the issues involved and to share experiences over a period of three days from 1-3 December, 1983.

The Seminar was attended by 48 participants from Afghanistan, Bangladesh, India, Nepal and UNESCO representatives from the Karachi Regional Office (Pakistan) and the Kuala Lumpur, Communication Advisor's Office (Malaysia), and also a representative of the Latin American Association of Communication Researchers from Columbia.

The Seminar was jointly sponsored and organised by the Centre for Communication Studies, the Film and Television Institute of India and University of Poona and was held in the Convocation Hall of Poona University. It was inaugurated by Hon'ble Shri Vithalrao N. Gadgil, Minister for Communication, Government of India and the Key-Note address was presented by Professor N.L. Chowla, Director, Indian Institute of Mass Communication, New Delhi.

The Seminar participants belonged to several disciplines directly and indirectly contributing to the development and use of communication technology.

The Seminar was held in six sessions and one symposium on "Human Communications in Contemporary Society". Over forty papers were presented along with a video presentation on an experimental rural communication project in Kheda, Gujarat. Discussions ranged from topics such as 'Communication Technology and Cultural Values', 'Communication Development and Education', 'Communication Plurality of Cultures and Traditional media'.

The Hon'ble Shri V.N. Gadgil, Minister for Communications, Government of India, in his inaugural address stressed that if the term 'culture' is defined to include the entire achievement of human creativity—"all that man has added to nature, then the role of communication may be regarded as that of major carrier of culture. The communication industry which includes what is called the cultural industry has brought many a benefit to the human race. But it has also brought a great deal that is banal and sterotyped which dulls rather than stipulates the imagination. The influence of commercial and advertising interests and also the sterile conformism of culture approved by bureaucrats of all kinds pose a real danger of a levelling, impoverishment and hollowness of cultural life".

Many participants though quite aware of the great potential of new communication devices, at the same time expressed grave concern at the speed at which communication technology has penetrated into the South Asian region which is essentially multilingual and multi-cultural. The participants were unanimous in their expression of an urgent need for more indepth studies conducted by interdisciplinary teams involving communication researchers, practitioners, policymakers, technologists, scientists and the users. They also expressed the need for concerted action in the field through an exchange of experiences and information, both on a short-term and long-term basis at the national as well as sub-regional level. UNESCO, as an international agency already active in this field (havin also supported this seminar) wa singled out as one organisatio which should promote suc efforts. The major streams o recommendations which resulte from the three-day deliteration are given below:

General Recommendations

1. While it has become obvious that in several countries of the region many different innovative uses are already being made both o the newer technology an older forms of communication ranging from centralised, decentralised, and localised production and dissemination through smal guage, video, audio cassettes and even the folk medium, there has been littl systematic documentatio of the results of these practices and/or experiments. There was, therefore, a urgent need for such information collection and the dissemination of the findings of well-executed research to enable the countries of the region to take advantages (and to avoid pitfalls) of experiences o other nations. The Seminar strongly recommended a series of monographs on the experiences of each participating country in its historical perspective to be prepared at the national level by individuals and by institutions already actively engaged in the study of Communication and its Implications for Society.

2. In the light of the discussions a need was felt by the participants that a National Level Communication Policy (covering print, electronic and other media) should be evolved to ensure most effective economic and culturally acceptable utilization of communication technology and resources for socio-economic and cultural development of the peoples of the region, taking into consideration.

linguistic, cultural and social ethos.

3. Particular concern was expressed at the growing danger of communication technology leading to a situation where the masses remain merely passive receivers of messages. The need was, therefore, expressed to develop communication systems which would enable interactive and participative communication at low cost. The Key-Note paper had already drawn the attention of the participants to this grave issue by saying : "The software may also be unrelated to their (masses) needs; if that happens adoption of communication technology will create yet another class, small in size, but most powerful in influence".

4. Past experiences of communication researchers into various mass media showed that "Western Models of Communication Research" do not always provide meaningful answers to communication questions in the South Asian Countries. Several studies presented in the Seminar indicated this view. Therefore, participants pleaded for the development of indigenous models of Communication Research. Helistic and in-depth approaches were suggested for developing such models. Further, it was suggested to evolve methods and techniques should be useful to the countries of the Sub-region.

5. Owing to the tremendous demand for and use of Video Technology within the region, concern was expressed at the nature and pattern of the cultural influences across national boundaries. The Seminar, therefore, felt it imperative that studies should be undertaken without delay on the influence and impact of VCR in the South Asian region to pinpoint major social and cultural, implications of this new technology.

6. In the wake of the communication revolution it was strongly felt that the role of books and other printed media must not be lost sight of. Therefore, re-emphasis on all aspects of such older media development should form an important component of National Communication strategies.

7. New demands have been made by communication technologies on media practitioners. There is a shortage of trained manpower in the areas of software and related technologies. Therefore, there was general support for the creation and development of many more centres for training, re-training and reduction of training materials.

8. It was felt that both the media practitioners and media users are of equally great importance in any interactive communication strategy for development. Hence, serious training effort should be made for education of mass media recipients and users in order to achieve developmental goals. The specific target groups such as youths, women and disadvantaged groups should be given special attention. Well designed and tested training packages should be prepared to encourage these groups for active participation in the process of development. Exchange of visits of communication specialists to the important experimental centres in the Third World countries should be further encouraged by the agencies such as UNESCO. Such an effort will help deeper understanding and meaningful applications of nation-specific experiments in other countries.

9. Most of the communication training efforts which so far confined to provide skills which show "How to do it"? As the proclaimed aim of use of communication technology in the region is to bring about social changes, training efforts should have components to help practitioners understand the society and to help evaluate media inputs in terms of audience needs. Therefore, it was suggested that new training should embrace all three dimensions of production, evaluation and social context be evolved.

10. For more meaningful interaction and effective coordination among all communication specialists involved with the media including researchers, policy-makers, technologists, and others in the South Asian region, efforts may be made to form an association of professionals and institutions engaged in this area. The association may be called : The South Asian Communication Association (SACA).

11. Efforts may also be made by universities and postgraduate institutions to develop communication as an empirical discipline, in which humanities and social sciences can contribute to the sharpening of fundamental concepts. Such enquiry will not only (i) contribute to the quality of application to specific communication problems, but (ii) it can also lead to greater awareness of the potential inherent in the humanities, science and technology, and (iii) also to narrowing the gap between humanistic and scientific approaches to culture which may provide inputs for the multifarious decisions making processes in the realm of culture. □

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The participants noted that most of the countries faced problems of disfunctional, rigid and irrelevant educational systems leading to a world-wide crisis in Education. The crisis is mainly due to heavy centralization in institutions of state as well as corporations. The educational system needed restructuring to be free from centralization and to move towards greater local initiatives. The system, it was noted, needed development of eapability to energise the community to foster self-rule with increasing participation of the community and the people. It was further noted that preparation of a rational and responsible human-being with social commitment should be the vital task before the educational system. This is lacking. Lack of adequate and appropriate communication within the society and between the members of the global society was a factor which hampered the development of social dimensions in tune with local realities. Crucial factors like problems connected with nuclear arms race, energy crisis, environment hazards and socio-economic desparities was not being reckoned with by the prevalent educational system.

Taking into consideration these disturbing features of the educational systems in the developed as well as developing countries, the Seminar felt :

(A) It was necessary to review the aims and objectives of education in the context of global education. The educational aims should reflect a global understanding among people with regard to the social-cultural, economic and political situations prevailing in the various countries of the world to enable them to realise their creative potential and to help them to develop it on the widest scale. The educational process should aim at inculcating values to help people continuously enlarge their horizons of understanding with a view to sustaining these without being lapsed into narrow chauvinism and any type of narrow mindedness. The educational process should further aim at enabling individual as well as groups to rise about petty things and view all problems in a world perspective. The educational system should motivate the whole community for a programme of life-long education and the community should develop a stake in the educational system. It should focus on developing initiative, self-reliance and co-operation. Gandhiji's contribution in this direction should be specially understood, so that all educational endeavours attempt to harmonise the ingredients — community life community service, community productive work with book learning. A 'bread-labour' i.e. socially useful productive work should be an imperative ingredient in any scheme of education.

(B) In order to achieve the aims and objectives of education, the existing curricula at various stages needed a close probe. Amongst other things, the curricula should include study of different cultures, religions, socio-economic problems, historical developments and geographical situations of different countries of the world; study of global issues and problems and their alternate solutions as for example, nuclear arms race and peace, human rights, non-violence, energy, population, ecology, illiteracy, and issues like drop-out, universalization of primary education, etc. fundamental global values like co-operation and peace, inter-dependence and world consciousness, work-oriented educational programmes linked with community service and community living. Creative programmes like arts including performing arts should find greater place in all the learning process particulary in child education where the foundations of global awareness and world consciousness are laid; the curricular activities should be made more creative and constructive in terms of human values.

(C) The instructional organisation and the administrative structure should be such as would facilitate flexibility in the curricular programme and curricular activities. The educational administrative structure should be flexible, participative in nature, and geared to provide proper responses to the felt need of the learners. The administrative structure should consider education for life as the focal point and should attempt at developing alternative educational systems giving a fair trial to the existing alternative of non-formal education.

(D) It is time that the community redefines the word 'teacher'. In order to meet the challenges of the global perspective of education, any person in the community with a reasonable level of knowledge and skill in his profession and an interest in the development of a child would be considered a teacher and not merely the person with a university degree and a training qualification. In other words, experienced farmers, the village craftsmen, and such others would be drawn into the educational system for the development of the children like formal teachers. Community resources—physical as well as human—will be geared to the requirements of teaching-learning process. Again, education of the children will be accomplished through a large body of educational personnel like the teachers, teacher-aids, guidance workers, reading specialists, experts in developing written expression, educational technologists, inservice education workers, social workers, etc. The training of all these personnel would concentrate not merely on the development of knowledge and skill but also development of proper attitudes, so necessary to develop world consciousness.

The seminar was of the opinion that to bring about change in the educational system was a process demanding patience and perseverance. The seminar noted that bringing about change in human-beings required sustained efforts and continuous work. Till the educational system was formally changed, the seminar thought of certain action programmes which could be launched even in the existing set up. Some of these action programmes suggested by the Seminar were :

(1) Opening up the school system to make it more flexible and change-prone.

(2) Organising world education clubs along with Unesco clubs, etc. and organising debates, group discussions, seminars at school levels and inter-school levels as well as at Community Centres.

(3) Encourage exchange of teachers, students to promote sharing of experiences.

(4) Integrate off-compus internships into college and university programmes, granting college credit for such experiences.

(5) Using community resources to vitalise learning programmes; linking socially useful productive work programmes to programmes of community development going on in the neighbourhoods.

(6) Highlighting curriculum features promoting global consciousness through Newsletter of the Association for World Education as well as through articles published in other journals with similar objectives.

(7) Cooperating with existing organisations like Experiment In International Living, U.N. Associations, etc. and setting up similar programmes within the country.

(8) Expand the network of world education fellowship.

In substance, the Seminar felt that development of a harmonious outlook linking local with global perspectives is now imperative to arouse world-consciousness through promotion of these ideas and actions at local values.

To this end, **Association for World Education** should promote world-education forums in all sectors of our educational life and cooperate with U.N. University, U.N. Peace University, ECOSOC, UNESCO, etc. It should also collaborate with a number of Non-Government Organisations working towards the same goal. The role of rural and developing societies is particularly vital in this sphere.

BHU organises seminar on training for university teachers

The Vice-Chancellor of the Banaras Hindu University, Prof. Iqbal Narain, has stressed for a radical look at the education system and appealed to the teaching community to make their little contribution individually in the nation building process.

He said extension education is also a vital element of the system apart from teaching and research. Therefore, he emphasised, "Interventionist Action Oriented Research".

Prof. Iqbal Narain was inaugurating the "National Seminar on Preservice and Inservice Training of University and College Teachers" in the Faculty of Education, BHU. The two-day Seminar was sponsored by the National Commission on Teachers II, appointed by the Goverment of India. Prof. Iqbal Narain is a member of the Commission.

He described the theme of the Seminar as "Critical' in Nation Building Process" and added "Institution of two Commission as historical importance in India". For the first time, two commissions were reviewing the state of education and teaching from the primary level of education to the higher education stage, taking account of all the institutional infrastructure, he informed. He also pointed out that unlike the earlier reports, the commission will focus their attention on the status of the teachers.

Advocating for a change of the earlier concept of teachers, he emphasised for treating them as "Professionals". Only then question of Pre-service and In-service training arises, he said.

Emphasizing the need of Pre-service and In-service training of the teachers, he stressed for the reviewing the present syllabi of the B.Ed. & M.Ed. courses qualitywise. According to Prof. Narain when we are talking about Pre-service training we must ponder over the merger of the class room" with the "work room" as well. In-service training is also a "part and parcel of the continuing education" which should include Methodology of research, study and techniques.

Prof. B.M. Shukla, Vice-Chancellor of the Gorakhpur University in his presidential remarks made a strong plea to the Seminar to "re-emphasise the role of the teachers". He said, teachers in the slave India had got greater respect in society than to-day.

He hoped that recommendations of the Commission will be implemented by the Government because time has already run-out.

Joint Secretary of the Commission, Prof. R.P. Singh informed the activities of the Commissions and underlined the importance of recommendations to be made by the Seminar.

In the first session of the Seminar Prof. B.B. Dhar presented the theme paper entitled Inservice training for teachers of higher Education—A view point" for the discussion.

Examination reforms at Saurashtra University

From the examinations of 1984, the Syndicate of this University has adopted a scheme according to which for all the examinations in the faculty of Arts, Science, Commerce, Education, Law, except post-graduate examinations, there will be two Boards of paper setters which will set different sets of question papers. In the faculties of Home Science, Medicine and Engineering the same Board of paper setters in each examination will set two sets of question papers. Out of the two sets of question papers set, the Vice-Chancellor will decide as to which question paper of which set should be printed for the examination.

The University has started the system of centralised collection of answer books from all the examination centres except the examination centres under the faculties of Medicine, Engineering and Rural Studies. The answer books are collected at one place everyday on the days of the examinations. Each centre has been instructed to send everyday answer books collected at the centre for the respective examination. This has avoided the sending of the names of the examiners to the different centres. It has also avoided the late despatch of the answer books by the different centres to the examiners.

After the answer books are centrally collected by the University, the despatch of answer books also is done at a centralised place. The distribution of answer books for evaluation has to be sent to this centre and the answer books are despatched to the various examiners by this centre.

A senior responsible academician of the rank of a Principal or a Professor is put incharge of the organisation of work at the centralised despatch centre.

Both the centralised collection centre and the centralised despatch centre are fixed at different places and separate senior responsible persons are put incharge.

The University has also adopted the centralised evaluation system for the final B.A., B.Sc., B Com. examinations. A senior responsible academician of the rank of a Principal or a Professor is entrusted with the organisation work at this centre. The Chairmen of the Boards of Examiners and all examiners are requested to come to the centre and stay there for the number of days for which the evaluation continues. For their stay, the centre provides lodging & boarding facilities. Each Chairman of the Board of examiners decides the distribution of answer books to the different examiners. The Centre Incharge has been instructed to stick slips on the seat numbers on each answer book so that the examiner is not able to decipher the seat number of the candidate. After the evaluation is made by the examiners and the moderation is done by the moderators, the answer books alongwith the mark lists are handed over to the centre incharge. The Centre prepares the the result of the candidates and submits the same to the University.

Punjabi Varsity lectures for national integration

Three lectures which were delivered by eminent scholars for promotion of national integration, world peace and understanding organized by the Department of Guru Granth Sahib Studies of the Puhjabi University on Dec. 16, 19 and 31 were presided over by Dr S.S. Johl, Vice Chancellor.

Prof. Gulwant Singh in hi inaugural lecture "Message o Gita" remarked that Gita provided a universal thought and therefore, it did not belong to any particular religion or area.

Gyani Lal Singh, former Chairman of Punjab Public Service Commission in his lecture on "Human Values in Gurbani" remarked that Guru Granth Sahib contained '*bani*' of saints from different parts of the country and their languages and dialect were maintained and kept intact since centuries.

The third lecture was delivered by Mr Bhagwant Singh Sidhu, Advocate General, Punjab, on "The spirit of the Sikhism" in which he pleaded for universal brotherhood and love for the humanity.

Seminar on British Drama

M.S.P. Mandal's Shri Shivaji College of Arts Science & Commerce, Parbhani, conducted a two-day Seminar on British Drama on 17-18 December 1983 under the aegis of the College of Humanities and Social Sciences Improvement Programme. The seminar was inaugurated by Dr. V.R.N. Prasad, Reader, Department of English, Marathwada University, Aurangabad. The seminar was attended by 20 lecturers from the adjoining colleges. Papers were presented on different dramas and were discussed at length.

The seminar was organised by the Department of English with Shri A.S. Ratnam, Head of the English Department as the convener.

New courses and college affiliation

A meeting of the Academic Council of the Punjabi University, Patiala was held at the Senate Hall on Dec. 31 under the chairmanship of Dr. S.S. Johl, Vice-Chancellor. The Council took a strong exception to the consistent violation of the University rules by the governing bodies of some of the non-government colleges affiliated to the Punjabi University.

The Council, while considering the periodical inspection reports of about 30 non-government colleges resolved to deal strongly with the "unapproved principals and lecturers" working in these colleges. The consistent violations of the University norms by these colleges may lead to their disaffiliation.

Earlier Justice S.S. Sarkaria, a former Judge of Supreme Court of India, Dr. R.S. Sandhur, Professor & Head, Department of Biology, Guru Nanak Dev University, Amritsar, Dr. D.S. Sidhu, Professor & Head, Economics Department, Punjab Agricultural University, Ludhiana and Dr. D.C. Saxena, Reader, Department of English, Panjab University, Chandigarh were co-opted as members of the Academic Council.

The Council also decided to start M.A. in Psychology, M.A. in Journalism and Mass Communication, a two-year Pre-Law course and M. Phil in Philosophy.

The Council recommended to relax the conditions for the candidates seeking admission to the post-graduate classes through correspondence courses. Now a candidate declared pass or given re-appear will be eligible for doing such courses. Earlier a candidate was required to score at least 45% marks at graduate level. The council also recommended to start M.Ed. through correspondence courses.

The Council decided to grant a five days special leave to the office-bearers of Panjab and Chandigarh College Teachers' Association.

The Council recommended to award a detail transcript which will separately include the marks scored in theory, practicals and internal assessment instead of the Detailed Marks Certificate.

The Council decided to relax the conditions for the improvement of division or marks. Now a candidate will have the option to appear even in one paper against the previous practice where a candidate was required to appear in at least 50% of the total papers.

The Council also decided to strengthen the postgraduate and research studies at the University Campus. It also decided to bifurcate the existing department of Mathematics and Statistics into two.

B.A. (Honours school) Courses, except in Punjabi will be discontinued.

Kakatiya Varsity's evening college

About 50 volunteers of the University Evening College of Kakatiya University participated in a ten-day NSS Special Camp held from November 27 to December 6 at Laibarthy village of Wardhannapet taluq in Warangal district, about 35 kilometers from the Kakatiya University campus.

They removed sand spread over three acres of wet land accumulated as a result of the recent floods that hit the State of Andhra Pradesh.

Prof. T. Vasudev, Vice-Chancellor of the Kakatiya University was the chief guest at the valedictory function.

Foundation courses lectures at Karnatak Varsity

Under the Foundation Courses Lectures Series, Dr. C.V. Seshadri, Director, Shri A.M. Murugappa Chettiar Research Centre, Photosynthesis and Energy Division, Madras, delivered two lectures on 'Development, Energy and Food' on 8th and 9th December, 1983 at the Karnatak Varsity. Dr. D. M. Nanjundappa, Vice-Chancellor, presided.

In his first lecture, Dr. Seshadri bemoaned the fact that in our country, technology was often considered an end in itself and, that it was only a tool, was rarely remembered. Distinguishing self-sufficiency from self-reliance, he defined self-reliance as the ability to meet basic needs locally; "our aim should be to develop our villages to become self-reliant in this sense. Our scientists will have to contribute seriously in this regard if the country is to develop really", he stated.

Dr Seshadri, in his second lecture, emphasised the need for holism in planning, meaning thereby a proper perspective of the needs of the people and need for priorities. Citing the example of potters—almost 13 lakhs of them under-employed — he said how, without asking them to learn new techniques, their traditional craft of making pots could be utilized in buildings result of a free innovation by the scientists of the Murugappa Chettiar Centre.

Dr Seshadri projected a number of slides of the work done by him and his team in South Indian villages and brought home vividly how, if proper priorities are sincerely visualised, science can do its utmost to convert this country into a truly self-reliant one.

Schools of excellence at Bharathidasan Varsity

The Planning Board of the Bharathidasan University has approved the proposal to establish twelve Schools of Excellence in the University during the next ten years.

Each School, co-sponsored by user-agencies, will have complete autonomy; academic and financial.

The first School of Excellence is the Bharathidasan Institute of Management, sponsored by B.H.E.L. Dr. C. Subramaniam, former Union Minister, is the Chairman, Board of Governors of this School.

Hon'ble Thiru Rajaram, Speaker, Tamil Nadu Legislative Assembly has consented to be the Chairman, Board of Governors of the second School, viz. School of Linguistics and Literary Studies. This School is to be established in collaboration with the Tamil University, Thanjavur.

Thiru R.V. Subramaniam, I.A.S. (Retd.), former Secretary, Ministry of Energy, Govt. of India, has consented to be the Chairman of the School of Energy.

Jakhar visits Kangri village

Shri Balram Jakhar, Speaker, Lok Sabha, recently visited Kangri—the mother village of Gurukula Kangri Vishwavidyalaya and its old building there. Dr. J.S. Sengar, Registrar, in his welcome address gave a brief history of the village. The Speaker called upon the villagers and Vishwavidyalaya NSS students who were camping there to do hard work. He was taken round the village by Shri G.B.K. Hooja, the Vice-Chancellor. While on the round, Dr. V. Shanker, Director and Dr. K.S. Bhinder, Executive Director of the Kangri Village Development Project explained to Shri Jakhar the quantum of development that has taken place in the village since 1981, when the Vishwavidyalaya started the project under the guidance of the Vice-Chancellor. The Govt. authorities of district Bijnor and State Bank of India Jwalapur have been playing a significant role in the development|tasks. Shri Jakhar was happy to note the progress and advised the villagers to take to various development schemes. He further told them to go in for Gobar Gas Plants so as to reduce pressure on forests for fuel wood which was very necessary for maintaining a healthy environ-

Sukhadia University News

The University of Udaipur which has been newly named as 'Sukhadia University', has introduced important changes in the structure of the University by deaffiliating the local colleges at Udaipur, which were not constituent colleges. The University now comprises all the Departments of Agriculture, School of Basic Sciences and Humanities,Collmege of Law.

Two academic councils have been established, one for Agriculture wing and the other for non-agricultural wing. The Board of Control (Senate) has been abolished and a new Board of Management (Syndicate) has been constituted instead of the previous Executive Committee.

The semester system of examination has been replaced by the traditional system in undergraduate classes of Agricultural wing.

The Govt. of Rajasthan, through an ordinance, has taken *inter alia* the following decisions for all the three Universities in the State :

(1) Teachers who have completed 18 years of service as Asstt. Professor or 12 years as Associate Professor will become eligible for ex-cadre promotions.

(2) 28% teaching posts have been reserved for SC/ST candidates and 3% for the disabled.

The School of Basic Sciences & Humanities, was divided in three faculties,—Faculty of Science, Faculty of Humanities, and Faculty of Commerce.

Rajasthan College of Agriculture has started an Opium Research Project an medicinal and Aromatic plants with the help of ICAR.

Maharshi Dayanand University's Library

The Maharshi Dayanand University has built up a massive library of 1.25 lac volumes over the years at an expense of Rs. 1.20 crores. The total number of back volumes and bound journals in the library is approximately 13293. The library subscribes around 836 current journals. The Book Bank possesses 2483 books, with a view to help the poor deserving students. The text-books are issued to the students by the Book Bank for the entire academic year on loan basis. The classification of books to various departments is : Mathematics : 5260, Physics: 4044, Chemistry: 4994, Economics: 7698, Political Science: 9967, English literature/Linguis-

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Rs. 23.00 lakhs have been set aside for the purchase of books and journals for the current session. The books are purchased through the university Bookshop at the dealer's rate of discount which are made available to the affiliated colleges also. The library also provides for photocopier and reprographic services to teachers, research scholars, university offices and students.

A proper library building remains an immediate need. The total budget of the university, however, provides for Rs. 1.00 crore for the construction of the library over a period of two years.

Phased take-over of Engg seats in Karnataka

The State Government of Karnataka, it is reported, has taken a decision to take away all the seats in private engineering colleges in a phased manner of 20 per cent of seats a year.

The State Education Minister said, managements of some private colleges went to the court when the Government last year took over 20 per cent of seats but it sas settled out of court. This year also another 20 per cent would be taken over by the Government, he said.

Planning Boards in Varsities

As per the directions of the University Grants Commission, Planning Boards would be set up for all the universities in Karnataka. There was a Planning Board for the Karnatak University with a representative of the UGC on the Board. Such boards were existing in Madras and Bombay Universities.

Rs. 12 crores for varsities to buy books for libraries

The University Grants Commission (UGC) has released Rs. 12 crores to various universities to enable them to purchase books for their libraries at the sixth New Delhi World Book Fair, scheduled to open on February 3.

This was announced recently by Dr. (Mrs) Madhuri Shah, UGC Chairman, in her inaugural speech at the launching of the "national book week", organised by the National Book Trust. Dr. Shah said that normally these grants were released to the universities much later but this year an exception had been made and the grants released early so that universities could buy books at the fair.

University of Fine Arts in Karnataka

The Karnataka Government is examining a proposal for setting up a University of Fine Arts at Belur in Hassan district next year, it is reported.

The university would start functioning after clearance from the Centre. The Government would also write to Unesco for assistance and cooperation, it is stated.

Options Law Course

A choice between a professional course and an academic course will become available after the new five-year integrated scheme of professional legal education is inaugurated all over the country.

While the professional course will entitle students to become eligible to practise as lawyers, the academic course will only help them secure jobs as assistants to advocates and in legal departments.

This dual system will emerge because the Bar Council of India has announced that only day colleges which teach for a minimum of five and a half hours per day will be recognised by it. The degrees awarded by evening, morning or correspondence colleges will only have academic value.

Library funds can be used for buying xerox

Funds released by the University Grants Commission for libraries can now be utilised for the purchase of xerox duplicating machines.

This was recently announced by the UGC Chairman, Dr. (Mrs.) Madhuri Shah at a National Book Trust function.

Dr. (Mrs.) Shah said this provision was being made to 'save' valuable books going back to the shelves after important pages in them removed.

By providing a copying machine, it would be possible for students to make a small payment and get photocopies of these pages. This saves time for the students and also saves costly reference books for the library.

Dr. (Mrs.) Shah said this was tried in 20 libraries and the tearing rate of books came down in these libraries.

UGC funds to Mysore Varsity library

The University Grants Commission has sanctioned Rs. 16 lakhs to the Mysore University Library during the sixth plan as against an outlay of Rs. 28 lakhs during the fifth plan.

It is opined that the University will have to shoulder the additional burden from its own resources.

Gujarat Philosophy Association meets

As a part of the Silver Jubilee Celebrations of the Nalini-Arvind & T.V. Patel Arts College, Vallabh Vidyanagar, the 4th session of the Gujarat Philosophy Association was hosted by it recently. About sixty five college and University teachers and post-graduate students from Gujarat participated in it. The conference was inaugurated by Dr. B.J. Sandesara and presided over by Dr. A.G. Javadekor. Shri H.M. Patel was the Chief Guest at the inaugural session. Papers on Metaphysics, Epistemology, Ethics and Logic were read and discussed. A symposium on 'Social Justice' was also held,

News from Agril. Varsities

APAU releases three new rice varieties

The Andhra Pradesh Agricultural University (APAU) has released three new varieties of rice. namely, MVU 4870, MTU 4239 and MTU 5293 which are high yielding but resistant to brown plant hopper (BHP) in the field when other varieties succumbed to the pest.

MTU 5293 has long slender grain, while MTU 4239 and MVU 4870 are of medium slender grain. These cultures found favour with cultivators because of grain quality coupled with resistance to the pest and are becoming very popular and widespread in the entire State.

By intensive research work, the breeders, at the agricultural research station, Maruteru have developed these varieties which have been released for minikit trials. They have a duration of 145 to 160 days from seed to seed, and are also suitable for cultivation in kharif season specifically in Godavari and Krishna deltas.

The average yield is recorded at 4.5 tonnes per hectare.

New jowar variety SPV-504 released

A new variety of Jowar SPV-504 (RSV 9 R) developed by the Mahatma Phule Agricultural University has been released for rabi cultivation recently. This was the result of the efforts made in the All India Coordinated Research Project on Jowar at Rahuri to evolve high yielding varieties since 1977. Constant trials for about 4 years at national level proved the variety SPV-504 to be the best one. In a national workshop of jowar scientists held at Hissar SPV-504 was released for rabi cultivation. The joint AGRESCO Committee of the four Agricultural Universities in Maharashtra also recommended it for cultivation. SPV-504 yields 31 and 13 percent more over Maldandi and SPV-86 varieties respectively. The advantage of this variety is that the fodder yield is equal to Maldandi and 14 percent more than SPV-86. The grains are bold with yellowish colour and yields 24 to 25 quintals/ha. as a dry crop. In irrigated condition with medium to heavy soils it yields 50-60 q/ha.

Farming system research project sanctioned to JNKVV

The Government of Madhya Pradesh has recently sanctioned to the Jawaharlal Nehru Krishi Vishwa Vidyalaya a research project on farming system under irrigated conditions to establish four research units around Raipur and Bilaspur, The objective of the project is to develop farming systems for most efficient use of irrigation water in the command areas. The duration of the project is 5 years and a grant of sum of Rs. 110.76 lakhs has been sanctioned for the purpose.

Training course in use of electric farm equipment

From March 5 to 9, 1984, the College of Agricultural Engineering of the Punjab Agricultural University is organising a 5-day free practical training course in safe operation, maintenance and repair of electric motors and allied equipment, used on the farms.

Young Matriculates with five years experience are eligible for this training. They are directed to apply with full particulars to the Dean of the College by February, 15.

Canadian diplomat visits PAU

Mrs. Jenice L. Sutton, a Counsellor in the Canadian High Commission at New Delhi visited the Punjab Agricultural University recently. Mrs. Sutton, who is also a reporter on economic affairs of India in the Canadian High Commission, had a meeting with Dr. Sukhdev Singh, Vice-Chancellor of the University and later visited the Departments of Economics & Sociology, Plant Breeding and Horticulture.

AIU News

Bombay to organise Vizzy Trophy tournament

Vizzy Trophy Cricket Tournament is an annual feature organised jointly by the Board of Control for Cricket in India and the Association of Indian Universities. The Vizzy Trophy is presented to the Winners of the Inter-Zonal Universities Tournament. The trophy has been instituted by the Board of Control for Cricket in India to commemorate the memory of Late Dr. Vijay Anand, Maharajakumar of Vizianagaram, popularly known as 'Vizzy'.

For the conduct of this tournament, BCCI has formed a Committee known as Vizzy Trophy Committee, which includes officials from the BCCI as well as the AIU. Universities in India are divided into four Zones, namely, North, East, South and West for Vizzy Trophy, which play the Inter-University Tournment at one of the centres in each Zone. Performance in the Inter-University Cricket Tournament forms the basis of selection of each Zonal teams for the Vizzy Trophy.

This year, the Vizzy Trophy Cricket Tournament is being organised at Bombay University from 3rd to 12th February, 1984.

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3. Duggal, Satinder Singh. *Profit management : A case study of selected engineering companies.* HS Gour, Sagar. Dr. R.K. Bharti.

4. Jha, Vishnukant. *Evaluation of commercial bank financing of rural economy in India.* BHU, Varanasi. Dr. K.N. Sharma.

5. Khanna, Rajeev. *Tourism and hotel industries in KAVAL Towns.* BHU, Varanasi. Dr. K.N. Sharma.

6. Sabir, Sajjad Husain. *An analytical study of the banking services after nationalisation : A case study of Indore District.* Devi Ahilya, Indore. Dr. M.B. Saxena.

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Folklore

1. Brama, Kameswar. *A study on the socio-religious beliefs, practices and ceremonies of Bados with special reference to the Bados of North Goalpara.* Gauhati U. Dr. B.N. Dutta.

2. Idris Ali, A.S.M. *Tiwa (Lalung) life and culture: A study with special reference to their folklore.* Gauhati U. Dr. B.N. Dutta.

3. Lahary, Monoranjan. *A study of Bodo folksongs.* Gauhati U. Dr. B.N. Dutta.

4. Mahanta, Prodipjyoti. *The role of Assam Vaishnavism in the making of Assamese life and culture : A study in an enduring tradition.* Gauhati U. Dr. B.N. Dutta.

5. Singh, Ngangom Navachandra. *The theme of Khamba and Thoiba and its significance in Manipur culture.* Gauhati U. Dr. P. Goswami.

6. Singh, Sarungbam Gunadhar. *Growing up in a Meitei village, Noyangkha Lawai, Manipur.* Gauhati U. Dr. B.N. Dutta.

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Philosophy

1. Akhter, Firdous. *The concept of man in existentialism.* HS Gour, Sagar. Dr. M.N. Mishra.

2. Barua, Manisha. *Impact of religion on Gandhi's political, economic and social thought.* Gauhati U. Dr. M.K. Kutty.

3. Baruah, Girish Chandra. *A critical study of the Vedantic concept of ultimate reality with special reference to S. Radhakrishnan.* Gauhati U. Dr. D.C. Chakravarty.

3. Chakrabarty, Saswati. *The role of religion in modern secular Republic of India.* Gauhati U. Dr. K.C. Das.

5. Chaurasiya, Manohar Lal. *Poorvi Madhya Pradesh kee janjatiyon ke vishvason ka darshnik adhyayan: Urav, Korva aur Kudhaku jatiyon ke vishesh sandarbh mein.* HS Gour, Sagar. Dr. Pratap Chandra.

6. Choudhury, Aparajita. *Problems of the physically handicapped children in Assam : A sociological study.* Gauhati U. Shri M.K. Kutty.

7. Choudhury, Rama. *Bhartiya darshan mein ahinsa ke sampratyav ka sameekshatmak adhyayan.* HS Gour, Sagar. Dr. B.N. Sharma.

8. Garg, Vishwanath Ramchander. *Patanjali yogsutra evam Gyaneshwar kee yog okiyon ka tulnatmak adhyayan.* HS Gour, Sagar. Dr. B.N. Sharma.

9. Gautam, Suresh Prasad. *Samkaleen Bhartiya chintan mein ashubh kee samasya : Ek sameekshatmak adhyayan.* HS Gour, Sagar. Dr. S.S. Negi.

10. George, N.V. *The doctrine of incarnation in Vaishnavism and Christianity: A critical and comparative study:.* Gauhati U. Shri M.K. Kutty.

11. Mahanta, Nirupama. *A study of the mystical thoughts of Sri Sri Sankardeva and Sri Sri Madhavadeva.* Gauhati U. Dr. (Mrs.) N. Sharma.

12. Sharma, Girish. *A Critical study of Kant's philosophy of logic.* Gauhati U. Dr. M.K. Kutty.

13. Singh, Prabhu Nath. *Vaishnava Vedanta mein param tattwa va ishwar.* BHU, Varanasi. Dr. B.N. Singh.

14. Vaid, Rohini. *Yog sadhna: Yogsutra aur visudwibhag ka tulnatmak adhyayan.* HS Gour, Sagar. Dr. B.N. Sharma.

Language & Literature

English

1. Asha, D.S. *Rudyard Kipling's short stories: Problems of structure and technique.* Pb U, Chandigarh. Prof. M.L. Raina.

2. Banerjee, Suman. *Themes, techniques in the short stories of Katherine Mansfield.* HS Gour, Sagar. Dr. (Mrs.) Urmila Verma.

3. Damodaran, C.P. *The India of Paul Scott: A critical study of the Raj Quartet.* Gauhati U. Dr. P. Katoky.

4. Dharam Singh. *Fantasy and the novel of satire : A critical study of the fictional writings of Evelyn Waugh, George Orwell and Aldous Huxley.* Pb U, Chandigarh. Shri Kulwant Singh Gill.

5. Sethi, Pardaman. *Aspects of love and society in the poetry of Elizabeth Barrett Browning.* Pb U, Chandigarh. Dr. (Miss) Kiran Sahni.

6. Shukla, Urmila. *A study of Graham Greene's technique with special reference to imagery.* HS Gour, Sagar. Dr. J.S. Mishra.

7. Singh, Shivanath Prasad. *Indian criticism on Shakespeare in English: A study of the value and significance.* Gauhati U. Dr. B.D. Singh.

Sanskrit

1. Agnihotri, Ram Shanker. *Laukik sanskrit sahitya mein akashvani.* HS Gour, Sagar. Dr. R.V. Tripathi.

2. Barah, Suresh Ch. *The treatment of Abhidha in sanskrit poetic and philosophical literature.* Gauhati U. Dr. A.K. Goswami.

3. Darshana Kumari. *Samkeepa Sariraka: A study.* Pb U, Chandigarh. Prof. H.M. Sharma.

4. Gupta, Ram Adhar. *Ramacharit Manas ke shabdon ke strotiya adhyayan.* HS Gour, Sagar. Dr. V.D. Mishra.

5. Jyotishi, Usha. *Sanskrit sahitya mein tapovan.* HS Gour, Sagar. Dr. Kusum Bhooria.

6. Phondani, Atma Ram. *Sanskrit vangmai mein Gayatri tatwa ka vishleshnatmak adhyayan.* Pb U, Chandigarh. Dr. Shashi Dhar Sharma.

7. Sharma, Radha Raman. *Mahakavi Navya Chandidass: Vyaktitva evam krititva.* Pb U, Chandigarh. Dr. D.D.Sharma.

8. Tiwari, Kamla. *Ramayan, Mahabharat tatha pramukh puranon mein Devalaya (Devsthan).* HS Gour, Sagar. Dr. (Miss) Kusum Bhuria.

Hindi

1. Aggarwal, Pratima. *Nari kavita mein vaidik evam pauranik sandarbh.* Kanpur U. Dr. Jagdish Prasad Agnihotri.

2. Ashwini Kumar. *Khalnayak tatha hindi pauranic natak.* Pb U, Chandigarh. Dr. G.S. Mann.

3. Badhghaiya, Laxmichand. *Madhyakaleen hindi bhakti kavya ke pramukh kaviyon dwara chitrit gram samaj aur sanskriti: Ek anusheelan.* HS Gour, Sagar. Prof. Premshanker.

4. Bajpai, Swaran Lata. *Premchand ke upanyason mein grameen aur nagar ke nari patra: Ek tulnatmak anusheelan.* HS Gour, Sagar. Dr. Govind Dwivedi.

5. Bhamawat, Kanaklata. *Athven dashak ke upanyason mein samajik, arthik evam rajnitik chetna.* Devi Ahilya,Indore. Dr. (Smt.) Sheela Vyas.

6. Bhattacharyya, Sathi. *Dharamvir Bharati ke gadhya sahitya ka adhyayan.* HS Gour, Sagar. Dr. Suresh Acharya.

7. Chouhan, Subhadra. *Hindi katha lekhikaon kee mahanagriya nari : Ek sarvekshan.* Devi Ahilya, Indore. Dr. S.S. Vyas.

8. Dixit, Pramila. *Acharya Hazari Prasad Dwivedi kee rachnaon kee bhasha shaili.* Kanpur U. Dr. Randhir Prasad Shrivastava.

9. Dohre, Mohar Singh. *Bundeli ka shringar kavya.* HS Gour, Sagar. Dr. Balbhadra Tiwari.

10. Dube, Arti. *Bundeli boli ka vyakarnik anusheelan.* HS Gour, Sagar, Dr. Balbhadra Tiwari.

11. Dube, Hanuman Prasad. *Hindi sahitya ke vikas mein Gonda janpad ka yogdan.* Kanpur U. Dr. Laxmi Kant Pandey.

12. Jain, Sandhya. *Dr. Ramkumar Verma ke kavya ka anusheelan.* Devi Ahilya, Indore. Dr. G.N. Tripathi.

13. Jain, Sunanda. *Sagar jile ke Jain dharmavlambiyon kee sanskritik shabdavali ka samaj bhashik anusheelan.* HS Gour, Sagar. Dr. R.S. Dube.

14. Jha, Krishna Kanta. *Study of society and culture as depicted in the literature of Vidyapati with special reference to Padavali.* Gauhati U. Dr. S.D. Singh.

15. Kaul, Shukl. *A semantic study of homophones of Sursagar.* Pb U, Chandigarh. Dr. Darshan Singh.

16. Kohli, Promila. *Jainendra ke upanyason mein avchetan.* Pb U, Chandigarh. Dr. Paresh.

17. Mangal, Rekha. *Vyaktivadi chetna ke sandarbh mein Jainendra ke upanyason ka anusheelan.* Devi Ahilya, Indore. Dr. S.D. Shukla.

18. Mishra, Madhuri. *Sathottary hindi upanyason mein manovaigyanik naye ayam.* Devi Ahilya, Indore. Dr. Rajendra Mishra.

19. Mishra, Shobha. *Sam-vyatmak sanskriti ke sandarbh mein Malik Mohammed Jaysi aur Kabirdas ka vishesh adhyayan.* HS Gour, Sagar. Dr. Govind Dwivedi.

20. Mitra, Indu. *Maharaj Raghuraj Singh rachit Rukmani Parinay ka sameekshatmak anusheelan.* HS Gour, Sagar. Dr. Balbhadra Tiwari.

21. Nigam, Manjulata. *Nirala sahitya ka shailee vaigyanik adhyayan.* Kanpur U. Dr. Shiv Kumar Dixit.

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23. Pawan Kumar. *Swatantrayottar hindi kavita mein nav rahasyavad.* Kanpur U. Shri Sidh Nath Mitra.

24. Poonga, Tej Raj. *Chambyalee lokgeeton ka sanskritik adhyayan.* HPU, Simla. Dr. O.P. Sarswat.

25. Sachdeva, Sujata. *Hindi ke adhunik hasya sahitya mein Ramai Kaka ka yogdan.* Kanpur U. Dr. Sudha Rani Pandey.

26. Sharma, Amar Nath. *Himachalee hindi katha sahitya ka sanskritik aur samajik anusheelan 1900 se 1969 tak.* HPU, Simla. Dr. Chaman Lal Gupta.

27. Sharma, Geeta. *Hindi niti kavya aur usmein Vrind ka sthan.* Devi Ahilya, Indore. Dr. S.S. Vyas.

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30. Sharma, Tribhuvan Nath. *Yogic tantrik sadhna ke sandarbh mein Kabir ka vishleshan.* HS Gour, Sagar. Prof. Bhagirth Mishra.

31. Sharma, Yad Ram. *Bahu Ayami Umakant Malviya : Vyaktitva evam kritiyan.* Kanpur U. Dr. Bal Mukund Gupta.

32. Shukla, Jyoti. *Hindi Ramkavya ke nari patron ka tulnatmak adhyayan.* HS Gour, Sagar. Dr. L.N. Dube.

33. Shukla, Pushpa. *Prasadottar hindi prahasnon ka natya shástriya adhyayan.* Kanpur U. Dr. Sudha Rani Pandey.

34. Shukla, Uma. *Prem Chand kee kahanion mein nari patron ka adhyayan.* Kanpur U. Dr. Kailash Nath Gaudh.

35. Singh, Jata Shankar. *Kishori Da Vajpai aur hindi vyakaran shastra mein unka yogdan.* Kanpur U. Dr. Ram Sharma.

36. Singh, Renurani. *Ram Charit Manas aur Sahajram krit Raghuvansh Deepak ka tulnatmak adhyayan.* Kanpur U. Dr. Shiv Balak Shukla.

37. Singh, Vipin Behari. *Urvashi Mahakavya mein kam tatva ke vividh rupon ka anusheelan.* Kanpur U. Dr. Ajay Prakash.

38. Sinha, Parul. *Dr. Sampurnanand: Vyaktitva aur sahitya.* Kanpur U. Dr. Ganesh Datt Sarswat.

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41. Thakar, N.S. *Samkaleen hindi natak kee adhunik pravrittiyon ka anusheelan.* Shivaji U, Kolhapur.

42. Tiwari, Ranjana. *Bundeli kee shabd sampada ka sanskritik anusheelan.* HS Gour, Sagar. Dr. Balbhadra Tiwari.

43. Tripathi, Bhakti. *Sur aur Tulsi ke nari patron ka vivechan.* Devi Ahilya, Indore. Dr. R.C. Billore.

44. Tripathi, Pratap Narayan. *Dwivedi yugeen kavya parampara ke sandarbh mein Kavi Kanhaiya Lal Tiwari "Kanh" ke kavya ka anusheelan.* Kanpur U. Dr. Awadhesh Narayan Shukla.

45. Upadhyaya, Brij Bihari. *Vartman samajik mulyaheenta ke sandarbh mein adhunik hindi vyang kee sarthakta.* HS Gour, Sagar. Dr. Suresh Acharya.

46. Vaish, Usha. *Shivani ka sahitya : Katha shilp aur lok priyata.* HS Gour, Sagar. Dr. K.K. Jain.

47. Vajpai, Abha. *Nirmal Varma ke sahitya ka adhyayan.* HS Gour, Sagar. Prof. K.K. Jain.

48. Vishnuji. *Ram kavya dhara ke adhunik madhuvor pasak kaviyon ka shodhparak anusheelan.* Kanpur U. Dr. Shyam Narayan Pandey.

49. Waghraje, Kusum Tajkumar. *Pandit Rahul Sanskrityayan ka yatra sahitya vivechan.* Devi Ahilya, Indore. Dr. Dilip Kumar Chouhan.

50. Yadav, Chandar Prakash. *Kanpur kee vartman patrakarita ke swarup ka mulyankan.* Kanpur U. Dr. Madhuleja Vidyarthi.

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1. Sinha, Kamala Kanta. *A modern linguistic approach to the Bishnupriya Manipuri language.* Gauhati U. Dr. S. Biswas.

Assamese

1. Maral, Bhagaban. *Semantics of Assamese.* Gauhati U. Dr. R.K. Mahanta.

2. Saikia, Lilabati. *The Ramayan of Madhava Kanda
A linguistics study.* Gauhati U. Dr. S.N. Goswami.

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1. Faiyazal Haqq. *Jalaluddin Sriyut : His Life and wor
Gauhati U. Dr. A.G. Jafri.

2. Molla, Mohammed A. Ali. *A critical study of the wo
of Al Nasi Li Dinnillah.* Gauhati U. Dr. A.O. Jafri.

Malayalam

1. Gopinathan Nair, N. *Translation of sanskrit dramas
Malayalam: An assessment.* U Ker, Trivandrum. Dr. T
Ramachandran Pillai.

2. Ramachandran, G. *Vision of Kumaran Asan.* U K
Trivandrum. Dr. T. Bhaskaran.

Geography

1. Barman, R. *Geomorphology of Kamrup District :
morphometric and quantitative analysis.* Gauhati U. Dr. M
hammed Taher.

2. Barua, Utpal. *Soil potential and agricultural producti
in the District of Kamrup with special reference to South Ka
rup Plain: A spatial Analysis.* Gauhati U. Dr. Mohamm
Taher.

3. Chandel, Rajendra Singh. *Agricultural change in Ko
Block, Jalaun, Uttar Pradesh.* BHU, Varanasi. Dr. V.K. Sing

4. Dutta, P. *The agricultural resources of the Brahmapu
Valley : The conceptual base for planning and manageme
Gauhati U. Dr. M. Borthakur.

5. Pal, Kanta Prasad Singh. *Population of Lashkar Pla
A geographical analysis.* Devi Ahilya, Indore. Dr. (Mrs.)
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6. Patidar, Badrilal. *A geographic appraisaı of populati
and food resources of Nimar Region, M.P.* Devi Ahilya, Indo
Dr. (Mrs.) V.S. Phanse.

7. Rastogi, Rakesh Kumar. *Study of landforms and th
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8. Sadanand. *Ground water resources.* BHU, Varana
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Amethi Block, Sultanpur : A geographical survey.* BH
Varanasi. Dr. Vijay Ram Singh.

13. Tiwari, Pramod Kumar. *Population characteristics
Middle Ganga Valley.* BHU, Varanasi. Dr. P.R. Sharma.

14. Trivedi, Venu. *A geographical study of market centr
of Malki-Desh (Comprising of Indore, Dewas Districts a
parts of Dhar, Jhabus, Sehore and Ujjain Districts).* Devi Ahily
Indore. Dr. (Mrs.) V. Phanse.

History

1. Barthakur, Gayatree. *A cult of pilgrimage in ancie
India.* Gauhati U. Dr. V.B. Mishra.

2. Choudhury, Biresh Ranjan. *Impact of the West on t
Nagas.* Gauhati U. Dr. S.K. Barpujari.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Library Science

1. Karisiddappa, C.R. *Reference tools in Kannada published since 1800 A.D. : A technical study.* Gulbarga U.

Psychology

1. Adhikari, G.S. *Rashtriya suraksha tatha samajik mulyon ke prati samajik tatha arthik star, laingik bhed se ghatit abhivritti ka ek adhyayan: Kumaun Kshetra ke high school chhatron ke vishesh sandarbh mein.* Kum U, Nainital.

2. Bhargava, Maya. *A critical study of attitude of adolescents towards Gandhian philosophy and its relationship with intelligence, socio-economic status and achievement.* U Raj, Jaipur.

3. Chouhan, Vijay Laxmi. *A Study of adoption of the new agricultural technology by tribal and non-tribal farmers in relation to certain socio-psychological factors.* MSV, Udaipur.

4. Dewan, Shashi. *Personality characteristics of small scale entrepreneurs: A comparative study.* IIT, Delhi.

5. Dutta, Ira. *A longitudinal study of the developmental dynamism of low birth weight (LBW) from* 8 *to* 10 *years of age.* IIT, Delhi.

6. Kalra, Raj. *Perception of syntactic structure in Hindi and English bilinguals.* U Delhi.

7. Krishna, Boyapata Shanti. *PSI and the differential effect : A study of Bimodel response pattern in E.S.P. tests.* Andhra U, Waltair.

8. Madala, Mani K. *A comparative study of entrepreneurs and non entrepreneurs on some background and personality variables.* IIT, Delhi.

9. Malhotra, Kamlesh. *Internal representation in reasoning in children.* U Delhi.

10. Nagar, Meera. *A study of the effect of noise on work performance of handicapped and non-handicapped children in relation to personality.* MSV, Udaipur.

11. Prasad, Sharat Chandra. *A study of attitudinal components and some personality variables.* U Raj, Jaipur.

12. Shaik Ameerjan. *A comparative study of personality and academic achievements of the scheduled castes and tribes college students of agricultural sciences.* Bangalore U.

13. Sharma, Kusum. *Factors related to creativity.* IIT, Delhi.

Sociology

1. Acharya, Jagabandhu. *Class hegemony and state policy: A sociological study of the evolution of industrial policy in India* 1914-62. JNU, Delhi.

2. Baboo, Bal Govind. *Economic exchanges in rural Orissa: A comparative study of six villages.* JNU, Delhi.

3. Gupta, Ravi Chandra. *Kushth rogiyon ka samajshastriya adhyayan.* LNMU, Darbhanga.

4. Jeyasingh, J. Visuvathas, *Social and economic context of criminal behaviour.* U Ker, Trivandrum.

5. Singh, Satya Pal. *A study of the Buksas of Tarai Area of Uttar Pradesh with special reference to Nainital District.* U Raj, Jaipur.

6. Uma Shankari. *Sociology of religion : A temple in Tamil Nadu.* U Delhi.

Social Anthropology

1. Bandyopadhyay, Swarajkumar. *A diagnostic study student unrest in West Bengal as related to certain sociolog and institutional factors: A multidimensional approach.* U C cutta.

Political Science

1. Das, Sukumar. *Socialist transformation of India and economic provisions of the Indian Constitution.* U Burdw

2. Goswami, Govinda Ballav. *Ahom-Mughal relatio A study in diplomatic history.* Gauhati U.

3. Jha, Jawahar. *Kahra Panchayat Samiti in Saharsa trict : A case study in political sociology.* LNMU, Darbhan

4. Kishan Chand. *Gandhi and the Congress Socialist Pa* 1934-48 *: An analysis of their interaction.* Pb U, Chandiga

5. Kuriakose, K.C. *Catholic Church and politics in La America: Types and role of Catholic elites.* JNU, Delhi.

6. Mathur, Krishna Mohan. *Administration of po training in India.* U Raj, Jaipur.

7. Pandey, Ashok Kumar. *Local level planning and ru development : An empirico-analytical study.* Mag U, Bo Gaya.

8. Rawal, Surya Prakash. *Participative science in the Peop Republic of China : A study of 'Open Door' scientific resear* U Delhi.

9. Shukla, Vidhi Narayan. *Bharat kee vartman rajniti m hinsavritti: Karan evam prabhav ka vishleshnatmak adhyay* RSU, Raipur.

10. Singh, Ram Sarekh. *Politics in rural co-operatives Bihar : A political study.* Mag U, Bodh Gaya.

Economics

1. Agrawal, Renu. *Potentialities of industrial developm in Kumaun with special reference to forest resources.* Kum Nainital.

2. Bhagat, Lakshminarayan. *An investigation of sup responses in agriculture and their differentials in a backw economy : Chotanagpur Region,* 1956-57 *to* 1976-77. U Calcut

3. Dashora, Narendra Kumar. *The study of prices in In using quarterly data over the period* 1951-1977. MSV, Udaip

4. Devale, Shanta. *Madhya Pradesh mein jansankh sambandhi pravritiyan tatha parivar niyojan,* 1957 *se* 1977 *tak.* Devi Ahilya, Indore.

5. Jain, K.K. *Agricultural reconstruction through operatives in Kumaun Hill Region since Independence*, Kum Nainital.

6. Jain, Manju Devi. *Rajasthan kee suti vastra mil mein sharam samasyaen: Ek tulnatmak adhyayan.* U Raj, Jaip

7. Nagrale, Mahadeo Kacharu. *Irrigation and its imp on agricultural development in Vidarbha Region.* Nagpur U

8. Nirmala Devi, K. *Applicability of the neo-classi growth model to the U.S. economy* 1947-69. Nagarjuna U.

9. Paliwal, B.L. *Economics of rural electrification Rajasthan.* MSV, Udaipur.

10. Pande, Mrigesh. *Niyojit vikas evam bhugtan santul Bhartiya rupaye ke avmulyan* 1966 *ke uprant.* Kum U, Nainit

11. Saikia, Anuva. *Female participation in agricultu operation in Assam: A study of Sibsagar District.* Gauhati

12. Singh, Vinod Kumar. *Financing of small and cotto industries in Patna Division of Bihar.* HS Gour, Sagar.

13. Tirath Singh. *Impact of farm technology on income distribution and agricultural development in Panjab.* Pb U, Chandigarh.

14. Usha Rani, D. *Costs of rearing children and other socio-economic determinants of fertility.* SVU, Tirupati.

15. Venkatarayudu, Alapati. *A study of sales tax in Andhra Pradesh,* 1960-61 *to* 1980-81. Andhra U, Waltair.

Law

1. Bhatt, R.L. *Squeezing out of minorities in the corporate bodies.* MSV, Udaipur.

2. Rath, Sacchidanand. *Critical review of nature of liability under the Prevention of Food Adulteration Act.* Utkal U, Bhubaneswar.

Public Administration

1. Batra, S.K. *Public accountability of state enterprises in Rajasthan.* U Raj, Jaipur.

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40.	M.S. University of Baroda Baroda-390002.	49
41.	University of Madras Madras-600005.	78

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42. Man Mohan Dhall
Printing Technologist
394, Chhatta Lal Mian
Daryaganj
New Delhi-110002. 41

43. Markazi Maktaba Islami
1353, Chitli Qabar
Delhi-110006. 16

44. Narosa Book Distributors
2/35, Ansari Road, Daryaganj
New Delhi-110002. 18

45. National Book Trust, India
A-5, Green Park
New Delhi-110016. 8

46. National Council of Educational Research & Training
Sri Aurobindo Marg
New Delhi-110016. 75

47. New Order Book Co.
Ellis Bridge
Ahmedabad-6. 62

48. Orient Longman Ltd.
5-9-41/1, Bashir Bagh
Hyderabad-500029. 45

49. Oxford & IBH Publishing Co.
Park Hotel Buildings
17, Park Street
Calcutta-700016. 20

50. Oxford University Press
2/11, Ansari Road
Daryaganj
New Delhi-110002. 41

51. Panjab University
Chandigarh-160014. 51

52. Parimal Prakashan
'Parimal' Khadkeshwar
Aurangabad-431001. 65

53. Pearl Offset Press
6/33, Kirti Nagar
Industrial Area
New Delhi. 44

54. Prentice Hall of India (P) Ltd.
M-97, Connaught Circus
New Delhi-110001. 91

55. Print House (India)
5, Tej Bahadur Sapru Marg
Lucknow-226001 (U.P.) 98

56. Publications & Information Directorate (CSIR)
Hillside Road
New Delhi-110002. 87

57. Punjab Agril. University
Ludhiana-141004. 40

58. Punjabi University
Patiala-147002 25

59. R. Seshadri
32, II Main Road
C.I.T. East
Madras-600035. 57

60. Rahul Publications
LB-646, Dhanwantri Nagar
Jabalpur (M.P.) 80

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61. Rajdhani Paper House
3645, Shankar Building
15, Idgah Road
Delhi-110006. 44

62. Raju Printers
178, Chhajju Colony
Babarpur, Shahdara
Delhi 110032. 28

63. Sardana's Art Centre
87, Mohan Singh Place
Connaught Circus
New Delhi-110001. 80

64. Sardar Patel University
Vallabh Vidyanagar-388120. 30

65. Scientific Instruments (Indore) Pvt. Ltd.
B-14, Industrial Estate
Indore-452003. 79

66. Shanker's Book Agency
1/1, Meredith Street
Calcutta-700072. 63

67. Springer Books (India) Pvt. Ltd.
6, Panchsheel Community Centre
New Delhi- 110017. 19

68. Sri Venkateswara University
Tirupati-517502. 63

69. Sterling Publishers Pvt. Ltd.
L-10, Green Park Extension
New Delhi-110016. 29

70. Tata Instt. of Social Sciences
Deonar, Post Box No. 8313
Bombay-400088. 65

71. Tata McGraw-Hill Publishing Co. Ltd.
12/4, Asaf Ali Road
New Delhi-110002. 93

72. Today & Tomorrow's Printers & Publishers
24-B/5, Original Road
Karol Bagh
New Delhi-110005. 95,105

73. UBS Publishers' Distributors Ltd.
5, Ansari Road
New Delhi-110002. 6,7

74. UDH Publishers & Distributors
4078, First Floor
Nai Sarak
Delhi-110006. 76

75. USSR Book Centre,
G-56, Connaught Place,
New Delhi-11001. 90

76. United Publishers
Panbazar Main Road
Gauhati-781001. 30

77. Varma Brothers,
21, Shankar Market,
Connaught Circus,
New Delhi-110901. 97

78. Wiley Eastern Limited
4835/24, Ansari Road
Daryaganj
New Delhi-110002. 62

79. World Thinkers Book Centre
K.K. Nagar
Mettupalayam-641301. 80

UNIVERSITY OF DELHI

Advertisement No. Estab. IV/85/84 **Dated : 19-1-84**

Application on prescribed form are invited for the following posts:—

	Department	Designation
1.	Education	Two Readers
2.	Computer Science	Two Readers
3.	Psychology	One Reader
4.	Economics	(i) One Professor (ii) Two Readers (iii) One Research Associate
5.	Botany	(i) Two Professors (One in the field of Cytogenetics/Ultrastructure) (ii) Three Readers
6.	History	(i) One Professor (ii) Four Readers (2 for South Campus)
7.	Mathematics	(i) One Professor (ii) Three Readers (One for South Campus)
8.	Mathematical Statistics	One Professor
9.	Philosophy	One Reader (For South Campus)
10.	Zoology	Three Professors
11.	Linguistics	One Reader
12.	Faculty of Science	One Reader in History of Science and Scientific Methods.
13.	Commerce	One Reader (Marketing)
14.	Hindi	One Reader
15.	**Faculty of Law:**	
	Campus Law Centre	One Professor
	Law Centre-I	One Reader

The Scale of the pay of the posts are

Professor : Rs. 1500-60-1800-100-2000-125/2-2500.

Reader : Rs. 1200-50-1300-60-1900.

Research Associate : Consolidated monthly emoluments as under:—

A—Rs. 1,100/- p.m. (Fixed)
B—Rs. 1,300/- p.m. (Fixed)
C—Rs. 1,500/- p.m. (Fixed)

(On the recommendation of the Selection Committee).

All posts, except that of Research Associate, carry D.A., C.C.A. and H.R.A. as admissible under the rules in force in the University from time to time.

Essential Qualifications for

Professorships

An eminent scholar with published work of high quality actively engaged in Research. Ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Readership

Good academic record with at least second class Master s degree in a relevant subject with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) Reeearch, or (ii) innovation in teaching methods or (iii) production of teaching materials.

Five years' experience of teaching in under-graduate/post-graduate classes and/or post-doctoral research work with evidence of published work.

Note: Second Class would mean at least 50% marks in the subject or equivalent grade.

Research Associate

Consistently good academic record with first or high second class (B+) Master's Degree or an equivalent degree of a foreign University in the subject concerned.

Note: Initial appointment will be for a tenure period of three years extendable by another two years only. In no case the tenure will extend beyond 5 years in all.

Special/Desirable Qualifications
Readership in Education

In any of the following:

(i) Science Education
(ii) Educational Administration
(iii) Teacher Education

Readership in Psychology
Specialisation

Industrial Psychology or Clinical Psychology.

Desirable qualifications for Industrial Psychology

Advance Practical Training in Industrial Organization.

Desirable qualifications for Clinical Psychology

DM&SP or its equivalent or at least two years Hospital experience/training or degree in Medical field such as MBBS or MD in Psychiatry.

Readership in Economics : (For one post) Economic Theory.

Readership in Botany

1st Post : Specialization in Plant Anatomy / Genetics / Microbiology / Cell Biology in the order of priority.

2nd Post : Specialization in Plant Morphogenesis with the desirable qualifications as 'Experience in Tissue or Protoplast Culture.'

3rd Post: Specialization in Cytogenetics or Microbiology or Plant Pathology.

Professor in History

Medieval Indian History.

Readership in History

1st Post : (for South Delhi Campus) : Modern Indian History with ability to teach and guide research in Western History.

2nd Post (for South Delhi Campus) Medieval Indian History with knowledge of Persian

3rd Post : British/West European History with knowledge of at least one West European Language other than English.

4th Post : Russian/East European History with the knowledge of either Russian or at least one East European language.

Readership in Mathematics

1st Post : (for South Delhi Campus): Fluid Mechanics or Differential Equations.

2nd Post : Algebraic Geometry/Algebraic Topology/Commutative Algebra.

3rd Post : Fluid Dynamics/Differential Equations.

Readership in Philosophy : (South Campus): Specialization in Indian Logic & Epistemology together with sound knowledge of original Sanskrit texts will be preferred..

Professorships in Zoology

Specialization in any of the following areas:

1. Endocrinology
2. Fisheries Biology
3. Developmental Biology
4. Neurobiology
5. Genetics
6. Ecology

Readership in Linguistics

Experimental Phonetics (Knowledge of Speech Synthesis/Speech Therapy).

OR

Specialization in either Psycholinguistics (uptodate knowledge of transformational Generative Grammar).

OR

Historical Linguistics (Specialization preferably in non-Indo Aryan languages).

OR

Lexicography and Lexicology (Specialization in field Semantics and Generative Grammar).

The prescribed application form can be had from the Information Section of the University either personally or by sending a self addressed envelope (size 13 cm× 28cm) with postage stamps worth Rs. 3.45 P.

The candidates will have to produce the original documents relating to their age, qualifications, experience etc. at the time of interview.

Applications (separate for each post) accompanied by attested copies of Degrees, other certificates, marksheets, published research articles, etc. should be addressed to the Registrar. The last date prescribed for receipt of the application is **18-2-1984**.

Note

1. It will be open to the University to consider the names of suitable candidates for teaching posts who may not have applied. Relaxation of any of the qualifications may be made in exceptional cases, in respect of all teaching posts on the recommendations of the Selection Committee.
2. Canvassing in any form by or on behalf of the candidates will disqualify.
3. Candidates from outside Delhi, for teaching posts only, called for interview will be paid to and fro single second class rail fare.
4. The University reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant.

Madan Mohan
REGISTRAR

THE UNIVERSITY OF KASHMIR

SRINAGAR

No. F.10 (App-Gen) Ku/83
Dated : 21-1-1984

NOTICE

The last date for receipt of applications for various teaching posts advertised vide this office notice of even number dated 14-12-1983 and published in 'University News', Vol. XXII No. 1 **January 1, 1984** is extended upto and including **29-2-1984**.

Peerzada Ghulam Hassan
Special Officer (Admn.)

PANJAB UNIVERSITY

(Advertisement No. 1/84)

Applications are invited for the following posts so as to reach the Registrar, Panjab University, Chandigarh, alongwith postal orders of Rs. 10/- by **17-2-1984**. Fourteen days extra time is permissible to persons who have to submit their applications from abroad

1. **Readers** : (Rs. 1200-50-1300-60-1900). Library Science-1, Sanskrit-2 (Teaching-1, Research-1) (VVBIS & IS, Hoshiarpur), Department of Sanskrit-2, Commerce-1 (Directorate of Correspondence Courses), Centre for Computer Science & Applications-1.

2. **Lecturers** : (Rs. 700-40-1100-50-1600). Mathematics-2, Sanskrit (Teaching-1, temporary-leave vacancy, VVBIS & IS, Hoshiarpur) Public Administration-1, English-1 (P.U. Evening College), Sociology-1 (Directorate of Correspondence Courses, Panjab University), Statistics-3 (temporary, but likely to be permanent-2, temporary leave vacancy-1), Law-1, Centre for Computer Science & Applications-2.

3. **Research Fellows** : (Rs. 700/-p.m. fixed), with an annual **contingent grant of Rs. 2000/-**. Mathematics-1, Statistics-1.

4. **Research Scholars** : (Rs. 600/-p.m. fixed), with an annual **contingent grant of Rs. 2000/-**.

Mathematics-2, Psychology-1.

5. **Junior Research Fellows: 4** (Rs. 600/-p.m. fixed), with an annual contingent grant of Rs. 3000/-. (Centre for Advanced Study in Mathematics).

6. **Research Assistants** : (Rs. 550-20-650-25-750). Statistics-1, Economics-1.

7. **Instructors** : (Rs. 550-20-650-25-750). Statistics-1.

8. **Senior Research Fellows**: Chemical Engineering & Technology-5. @ Rs. 800/-p.m. (fixed), with an annual contingent grant of Rs. 3000/-.

10% of the Scholarships/Fellowships will be reserved for Scheduled Castes and Scheduled Tribes candidates provided they fulfil the minimum qualifications laid down for the award of such Scholarships/Fellowships. In case qualified candidates are not available the reserved Scholarships/Fellowships will be treated as unreserved. **The candidates whose results for the qualifying examinations are not declared by the closing date, may also apply. They shall intimate their results (if otherwise eligible) to the concerned Departments before the date fixed for selection.**

Candidates for the posts of Readers who do not possess a doctoral degree are required to submit 10 typed/cyclostyled copies of brief resume of their published work. 15% posts of Lecturers will be reserved for the members of the Scheduled Castes and 2% for the members of the Scheduled Tribes, but these will be filled up by others if no suitable Scheduled Castes/Scheduled Tribes applicant is available.

Applications for the posts of Lecturers in various subjects received earlier in response to Advt. No. 5/83 & 9/83 will be considered valid and entertained if the applicant is found qualified according to the revised qualifications as per detailed qualifications for this advertisement, a copy of which will be supplied on demand.

Application forms, alongwith detailed qualifications and Instructions etc., can be obtained from the Cashier, Panjab University, Chandigarh personally on payment of Rs. 2/- or by making a written request to the Deputy Registrar (Estt.), Panjab University, accompanied by self-addressed stamped envelope of 23× 10 cms and a postal order of Rs. 2/- drawn in favour of the Registrar, Panjab University, Chandigarh.

For details see instructions for candidates enclosed with the application forms.

UNIVERSITY OF POONA

GANESHKHIND PUNE-411007

Advertisement No. 1/84

REQUIRES

READERS (2)

Mathematics —1
Nyaya Pandit in Philosophy Department —1
(Grade : Rs. 1200-1900, Age limit —45 years)

General Qualifications

Good academic record with doctoral degree or equivalent published work. Actively engaged in research or innovation in teaching method or production of teaching materials. About five years' teaching and/or research experience with minimum three years as Lecturer or equivalent position.

LECTURERS (6)

Mathematics —1 (Reserved post)
Philosophy (Buddhist Studies) —1
History —1 (Temporary)
Experimental Psychology —1
(Grade : Rs. 700-1600,
Age limit : 35 years)

General Qualifications

(a) Doctor's Degree or equally high standard research work.

AND

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in the subject.

For developing Interdisciplinary Programmes, degrees in (a) and (b) above in relevant subjects.

Application forms and more details of qualifications, experience, etc. for the above posts available in person for Rs. 10/- in cash or by sending self-addressed envelope (23 cms.× 20 cms.) stamped for Rs. 2.50/- and Postal Order of Rs. 10/- to the Registrar separately for each post. Apply on or before **25th February, 1984**.

Other things being equal, preference will be given to candidates belonging to backward class.

S.P. Bhosale
REGISTRAR

SHREEMATI NATHIBAI DAMODAR THACKERSEY WOMEN'S UNIVERSITY

Applications are invited in the prescribed forms available from the University Office, on payment of Rs. 5/- (by M.O./Indian Postal Order/in cash) for the post of PRINCIPAL, P.V.D.T. COLLEGE OF EDUCATION FOR WOMEN, at the Churchgate Campus of the University at Bombay, so as to reach the undersigned not later than **FEBRUARY 20, 1984.**

Pay Scale

Rs. 1200-50-1300-60-1900 plus admissible allowances.

(Total emoluments about Rs. 2,434.75 per month.)

Qualifications & Experience

(a) Doctor's Degree in Education or research work of an equally high standard in one of the sujbects under Education.

(b) A consistently good academic record at the Master's level with at least first or high second class or equivalent degree of a foreign University, preferably in a subject under education.

(c) About 10 years experience of teaching and/or research. Preferably about 5 years administrative experience at an educational institution of higher learning. The condition of experience may be relaxed in case of persons with higher research qualifications or other conditions the Selection Committee may find adequate.

Note

(1) Only suitable candidates will be called for interview.

(2) Scheduled Castes/Tribes and Other Nomadic Tribes candidates will be given consideration as per the Government directives.

(3) Proficiency in Marathi/Gujarati essential, besides fluency in English.

(4) Higher starting salary may be considered in exceptional cases, if recommended by the Selection Committee.

(5) Accommodation on campus available.

Smt. K.H. Bhansali
REGISTRAR

SOUTH GUJARAT UNIVERSITY

UNIVERSITY CAMPUS, UDHNA-MAGDALLA ROAD
SURAT-395007

Applications are invited in the prescribed form (in eight copies) for the following teaching posts in the Post-graduate Departments of the University:

Department	*Professor*	*Reader*	*Lecturer*
1. Economics	One	One	—
2. Public Administration	—	—	Three
3. Sociology	—	One	One
4. Research Methodology Cell	—	One	—
5. English	—	One	—
6. Mathematics/Statistics	—	Two (Maths) Two (Stat.)	One (Maths) One (Stat.)
7. Physics	One	One	Three
8. Chemistry	One	One	Three
		(Second likely)	
9. Bio-Sciences	One (Zoology)	—	One (Botany)
10. Rural Studies	—	Two	Two
11. Business & Ind. Management	—	—	Two
12. Education	One	One	Two

Pay-Scales for the posts are as under

(1) **Professor** : Rs. 1500-60-1800-100-2000-125/2-2500.

(2) **Reader** : Rs. 1200-50-1300-60-1600-Assessment-60-1900.

(3) **Lecturer** : Rs. 700-40-1100-50-1300-Assessment-50-1600.

In addition to pay, the teachers of the University Departments are entitled to draw Dearness Allowances, House Rent Allowance and other benefits like Contributory Provident Fund and Gratuity as admissible under rules from time to time.

According to the policy of reservation adopted by the University, all posts of lecturers advertised are reserved for Scheduled Castes/Scheduled Tribe and backward class candidates. Candidates belonging to these classes should clearly indicate in their applications the caste to which they belong and attach necessary certificates along with their applications. If suitable candidates belonging to these classes are not available, candidates belonging to other classes would be considered for temporary appointment. However, this is the second advertisement for some of the Lecturer posts and if suitable candidates from backward classes are not available for these posts, they will be filled up by candidates belonging to other classes.

Information about qualifications and special field in which the appointment on each post will be made, will be submitted with prescribed application forms which can be had from the undersigned on payment of Rs. 7/- in cash or by postal order alongwith self-addressed envelope of 22 cm x 13 cm. size with postal stamps worth Rs. 3.10 ps. affixed thereon.

The last date for receipt of applications is **29-2-1984.**

Surat, **G.A. Desai**
REGISTRAR

PUNJABI UNIVERSITY

PATIALA

(Advertisement No. 53A/PRO./Estt./ January, 84)

Applications are invited for the following posts:—

1. **Professor in Chemistry (Organic):** (One): (Grade : Rs. 1500-60-1800-100-2000-125/2-2500)

Qualifications

An eminent scholar with published work of high quality actively engaged in research. About ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

2. **Lecturer in Geography** : (One) Leave vacancy upto 15-9-85

(Grade: Rs. 700-40-1100-50-1600),

Qualifications

(a) A Doctor's degree or research work of an equally high standard and

(b) Good academic record with, atleast second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (b) above.

Provided further that if candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research laboratory/ organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

3. **Research Associates in Economics (UGC Special Assistance) : (Two).** (Grade : Rs. 700-40-1100-EB-50-1300).

Qualifications

Ph.D. in Economics/Agricultural Economics with good grounding in quantitative methods in Economics.

4. **Junior Research Fellows in Economics (UGC Special Assistance) :** (@ Rs. 600/-p.m. all inclusive).

Qualifications

Junior Fellowship is open to persons preferably below the age of 30 years, who have obtained a Master's degree of a recognised University in the first or high second division (with at least 55% marks of B+in the seven point grade system).

5. **Medical Officer:** (Grade: Rs. 940-30 - 1000 - 40-1200/50-1400/60-1700-75-1850 + N.P.A. as per Government rates).

Qualifications

(i) M.B.B.S. with one year House job in obstetrics and gynaecology in a Govt. Hospital. D.G.O. will be preferred.

(ii) Three years experience in medical profession in an institution/Govt. Hospital.

(iii) Registered with the Punjab Medical Council or with any other duly constituted Medical Council in India.

(iv) Working knowledge of Punjabi Language.

(v) Medical Officer will be provided with free unfurnished accommodation at the Campus, subject to availability.

6. **Calligraphists :** (Grade Rs. 400-10-450/15-525/15-600).

Qualifications

At least 2nd division Matriculate/Hr. Secondary or B.A. with knowledge of calligraphy in English, Punjabi and Hindi. Qualifications are relaxable in the case of candidates exceptionally good in calligraphy.

Candidate must have passed Punjabi as one of the subjects in Matric or higher Course.

Note : For the post of Lecturer, Good academic record will be determined as under:-

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree or

(ii) A candidate without Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

General

Candidates for teaching & research posts should possess working knowledge of Punjabi upto Punjabi Preveshka standard. Persons from outside Punjab could, however, be considered for appointment but they will be required to give an undertaking in writing that they will acquire the requisite qualifications in Punjabi within a period of two years.

Higher start within the grade admissible depending upon the ability and experience of the candidate. House rent and Dearness Allowance, Provident Fund and Medical facilities according to University rules.

Applications complete in all respects on the prescribed form accompanied by a crossed Postal Order worth Rs. 5/- (Rs. 2/- for candidates belonging to Scheduled Castes/Tribes & Backward Classes) drawn in favour of the Registrar, Punjabi University, Patiala, should reach the University by **13-2-84.** The forms can be had from the Production & Sales Officer, Publication Bureau, Punjabi University, Patiala on payment of Re. 1/- by sending a crossed Indian Postal Order drawn in favour of the Registrar, Punjabi University, Patiala alongwith a self addressed envelope of the size of 25 x 10 cms. stamped with Rs. 1.70 postage for teaching posts and Re. 0.50 for Non-teaching posts which should be superscribed at the top in bold letters REQUEST FOR APPLICATION FORM FOR THE POST OF ——————————.

Persons already in service should apply through proper channel. Those who are not in a position to submit their applications through proper channel before the due date should submit an advance copy before the due date and regular applications through proper channel by **17-2-84.**

D.S. Kang
REGISTRAR

UNIVERSITY OF GAUHATI

GAUHATI-781014

Corrigendum

Advertisement No. 9 of 1983.

Read Item No. 1 **Professor of Biochemistry :-** One post, (Permanent), deleted from the advertisement.

ENDOWMENT

"The Proprietor, Shri R.K. Jain, preparatory to his retirement from the business, has created a Charitable Trust by the name of RAJENDRA KUMAR SUNEHRI DEVI JAIN CHARITABLE TRUST for the benefit of man-kind. One of the objects of the Trust is to grant financial help, scholarship, stipends and other aids to deserving students and to provide for their education.

Most of our capital is invested in the back volumes of journals on Botany, Biology, Chemistry, Geology, Physics and Mathematics. Therefore, in order to finance the Endowment, it is necessary that our stocks should be mobilised. We, therefore, offer our stocks of back volumes of journals to fit into the needs of the departments concerned, to the tune of Rs. 1,00,000/- or so. This Endowment money will be invested in the FDRs in favour of the University on permanent account and a monthly scholarship of Rs. 800/- to Rs. 1000/- for the duration of the study of the student, will be awarded from the interest which accrues from the FDRs.

Since it is planned to benefit as many students in the various Universities in India as possible, only one scholarship will be available to a University at a time.

If you want to avail of the benefit from the Endowment, we request you to kindly advise us the departments who have got good budget for purchase of backvolumes of journals, so that our stock-list of that particular subject may be forwarded to the concerned department for selection and acquisition of the journals.

Needless to say that earlier you finalise the acceptance of the proposal, the more choice you can exercise for selecting the journals."

TODAY AND TOMORROW'S PRINTERS & PUBLISHERS

PUBLISHERS & EXPORTERS

24-B/5, DESH BANDHU GUPTA ROAD, KAROL BAGH,
NEW DELHI-110005

G. B. PANT UNIVERSITY OF AGRICULTURE & TECHNOLOGY

PANTNAGAR-263145 (DISTT. NAINITAL)

ADMISSION NOTICE

A competitive Entrance Examination for admission to the First Year of the following BACHELOR'S and MASTER'S Degree Programmes will be held on Sunday the 6th May, 1984 from 8 A.M. to 11 A.M. at AGRA, ALLAHABAD, COIMBATORE, DELHI, HYDERABAD, LUCKNOW, PANTNAGAR, ROORKEE and VARANASI centres.

A–Bachelors Degree Programmes

Programmes	*Minimum eligibility qualifications*
1. B.Sc. Ag. & A.H.	Intermediate with Agriculture/ Mathematics/Biology from U.P. Board, Allahabad, or equivalent examination.
2. B.V.Sc. & A.H.	Intermediate with Biology/ Agriculture from U.P. Board Allahabad or equivalent examination.
3. B.Sc. Home Science (for girls only)	High School from U.P. Board Allahabad, or equivalent examination.

NOTE : 1—Candidates appearing in the above Boards' Examinations in 1984 are also eligible to appear in the Entrance Examination provided their results are declared by 15th July 1984, otherwise they will stand disqualified. 2—Admissions to the B. Tech. programme in Civil, Electrical, Mechanical, Agricultural, Electronics & Communication, and Production Engineering branches of this University will be made through a joint Entrance Examination conducted by the Coordinator, Admission Committee, Motilal Nehru Regional Engineering College, Allahabad, U.P.

Maximum Age Limit : 22 years on 30th November 1984 (3 years relaxation for Scheduled Castes/Scheduled Tribes, and Backward Classes candidates).

B–Master's Degree Programmes

Subjects: Agronomy-20, Agril. Economics-12, Plant Pathology-10, Plant Breeding-20, Horticulture-10, Soil Science-20, Entomology-12, Rural Banking & Agril. Economics-10, Animal Breeding-10, Animal Nutrition-10, Dairy Husbandry-5, Poultry Husbandry-5, Agril. Communication & Extn.-10, Rural Development Management-10, Agricultural Statistics-5, Biochemistry-12, Microbiology-10, Physics-8, Mathematics-6, Environmental Science-10, Plant Physiology-6, Food Technology-10, Vety. Bacteriology-3, Vety. Pathology-4, Vety. Hygiene & Public Health-3, Vety. Parasitology-4 Vety. Physiology-4, Vety. Pharmacology-4, Vety. Anatomy-4, Vety. Surgery-6, Vety. Medicine-4, Vety. Gynaecology & Obstetrics-4, Irrigation & Drainage Engineering-10, Soil & Water Conservation Engg-6, Farm Machinery & Power Engg.-10, Process Engg.-10, Structura Engg.-10, Hydraulic Engg.-10, Design & Production Engg.-5, and Home Science: Foods & Nutrition-8, Clothing & Textiles-4.

Eligibility qualifications: 55% marks in aggregate o above in Bachelor's degree examination conformin to the relevant group of subjects, or an equivalen OGPA from a recognized University, and 33% marks in the Entrance Examination separately i (1) Aptitude Test, and (2) Subject Matter Test.

NOTE: Those who are appearing or have appeared in the Bachelor's degree examination of differen Universities in India can also appear in the abov Entrance Examination provided that their results ar positively declared by 15th July 1984, otherwise they will stand disqualified.

Separate provision exist for the Junior Fellowship Holders of the ICAR/CSIR/UGC provided the fact of having been selected for the fellowship is intimated at least a week before the date of Entrance Examination. In-service candidates nominated by the ICAR/Govt. of India/Development Departments of States/other Indian Universities/Staff of the G.B. Pant University of Agriculture & Technology, will be considered under sponsored category.

Liberal financial assistance admissible as pe rules during the period of study for deserving students.

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O.S. Misra
REGISTRAR

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UNIVERSITY NEWS, FEBRUARY 1, 1984 Regd. No. R.N. 7180/63 Postal Regd. No. D(C)-1086

OUTSTANDING WORKS ON INDIGENOUS INDIAN EDUCATION

THE BEAUTIFUL TREE : Indigenous Indian Education in the Eighteenth Century by Dharampal, 16 x 25 cms., pp xvi, 436, 1983.

—Rs. 250.00

Mahatma Gandhi stated on October 1931 at Chatham House, London that "India today is much more illiterate than it was before a fifty or hundred years ago" and described the Indigenous system of education as "*the beautiful tree*" which was allowed to perish by the British rulers. Sir Philip Hartog, one of the founders of School of Oriental and African Studies, London, could not believe it and requested Gandhiji either to prove or to withdraw the statement. Gandhiji hardly had any time to give a well documented reply. But Mr. Daulat Ram Gupta and Prof. K.T. Shah wrote several long articles but Sir Philip Hartog was, however, far from satisfied.

Now, Dharampal has made a comprehensive study of archival materials, relating particularly to what was known as the Presidency of Madras. He has shown that Indigenous system of education at the end of eighteenth century compared more than favourably with the system obtaining in England at about the same time, in respect of numbers of schools and colleges proportionate to the population, the number of students attending these institutions, the number of years spent by students in schools and colleges, the diligence as well as the intelligence of students, the quality of teachers, the financial support provided from public and private sources, the high percentage of lower class (Sudras and others) students receiving education as compared to upper class Brahmin, Ksatriya and Vaishya students and range of subjects taught. Dharmpal, has thus fulfilled the promise made by the father of the nation.

ONE TEACHER ONE SCHOOL : Adam Reports on Indigenous Education in 19th Century India edited and introduced by Dr. Joseph DiBona, 17 x 25 cms., pp. xvi, 310, 1983.

—Rs. 150.00

While studies of schools and students in the contemporary world are common, we know very little about what education, was like in the Third World before the coming of Westerners. Occasional 19th century anthropological or governmental bureaucratic reports of indigenous education, reveal the intimate relationship between schooling and the culture of the people. These accounts are often unique studies that are difficult to compare.

The reports of William Adam, reprinted here, offer us a picture of what education was in Bengal and Bihar before the British system gained a foothold in India. It is statistical in many ways; there are number and, ages of teachers, students and books, there are exact description of teaching practice, fees, castes and much more. But there are also the insights of a man who knew a great deal about Indian society. Adam had spent 17 years in India when he began his work; he knew several Indian languages both classical and vernacular and perhaps most important, he was by nature sympathetically concerned about his subject. He was also adequately supported by government with what might be called as a three year grant. This happy combination of circumstances makes the Adam Reports one of the most valuable records of precolonial social practice available anywhere.

REVIEW : These volumes are a fascinating slice of history. . . contain a wealth of information on Indigenous Indian education—

The Hindustan Times, Delhi.

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22 FEB 1984
C.F.T.R.I., MYSORE

Prof. Pranab Mukherjee, Union Minister for Finance, delivering the Convocation Address at the Rani Durgawati Vishwavidyalaya, Jabalpur.

CLASSIFIED ADVERTISEMENTS

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Advertisement No. 31/83-84

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OR

Diploma in Civil/Mechanical Engineering with ten years experience in Water Supply Sewage and Sewerage Disposal System in an organisation or undertaking responsible for maintenance and operation of Water Supply, Sewage and Sewerage Disposal.

(3) **Dietician, (Permanent), JN Medical College Hospital**

Scale of Pay: 550-25-750-EB-30-900 plus allowances

Qualifications

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II-Desirable : Practical experience as Dietician in a Hospital for three years.

(4) **Senior Technical Assistant (Leave vacancy), Department of Pathology.**

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Qualifications

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(6) **Anaesthestist Technician, JN Medical College Hospital**

Scale of Pay : Rs. 425-15-500-EB-15-560-20-700 plus allowances.

Qualifications

I-Essential : Matriculate or equivalent. Certificate of Nursing. Three years practical experience as Anaesthestist Asstt. in a recognised Medical College Hospital.

II-Desirable : Working knowledge of Anaesthesia instruments and its care.

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(7) **Theatre Technician (Leave vacancy) JN Medical College Hospital.**

Scale of Pay : Rs. 425-15-500-EB-15-560-20-700 plus allowances.

Qualifications

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Higher initial start may be given to candidates possessing exceptional qualifications and experience. Candidates interviewed may be paid contribution towards their T.A. equal to one single second class Railway fare only.

Prescribed application forms and instructions may be had from the Assistant Registrar (Selection Committee) Registrar's Office, AMU on payment of lump sum amount of Rs. 5/- (for post No. one only) and Rs. 3/- for rest of the posts in cash (to be deposited in the Cash Section, Finance Office, AMU) or through an Indian Postal Order payable to the Finance Officer either personally or by sending a self-addressed stamped envelope of 23 x 10 cm. **LAST DATE FOR RECEIPT OF APPLICATIONS IS 25-2-1984 (upto 4.00 P.M. only).** Incomplete applications and those received late will not be considered.

Zamir Ahmed Khan
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY
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Advertisement No. A-175/84

Applications are invited for the following posts in Environmental Science and Engineering Group at this Institute. Applicants should give an account of their academic and professional records and a list of research publications along with their application.

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Essential : Consistently bright academic record with Ph.D. in Microbiology and two years professional/research experience.

Desirable : Professional experience/research in Water and Wastewater Microbiology.

The post is permanent and carries allowances such as D.A., C.C.A., H.R.A. as per rules of the Institute which at present correspond to those admissible to the Central Government employees stationed at Bombay. Applications should be made on the prescribed form obtainable free of charge from the Registrar of the Institute by sending a self-addressed envelope (25 cm x 10 cm size). Indian candidates abroad may apply on plain paper in duplicate.

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Applications for the post of Research Associate are to be submitted on plain paper.

The applications should reach the Registrar, IIT, Powai, Bombay-400 076, **on or before 29th February, 1984.**

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Editor :

M.S. RAMAMURTHY

Reading is a Pleasure. Make it a Habit.

Eversince UNESCO declared 1972 as the International Book Year, a World Book Fair has been organised in New Delhi every alternate year. Each successive World Book Fair has attracted greater attention than the preceding one.

The Sixth New Delhi World Book Fair which is being organised from February 4-14, 1984 at the well laid out, eye-pleasing Pragati Maidan at New Delhi, is spanning 20,000 sq. mtrs. of space spread over the Hall of Nations and several Halls in the Hall of Industries. 510 participants including 69 overseas participants from 30 countries of the world, will vie with one another in displaying over 5 lakhs of Indian and language publications. The Rs. 12-crore grant which the University Grants Commission is reported to have released to the Universities has come in only timely. A special feature would be a collective display of over 8600 Indian books along with nearly 1000 books received from different countries.

The Book Fair however is no longer a mere Fair where books will be displayed for people to buy or browse. It will hum with activity providing an opportunity for various sections of society like authors, publishers, printers, distributors, binders, etc. to meet, discuss in formal groups and exchange experiences and ideas informally on matters of professional interest. For example, the National Book Trust, India is organising an international seminar on "Development of Book Binding Techniques". This seminar has attracted a large number of delegates from various countries including UNESCO. At a special show being organised, China will be demonstrating its traditional craftsmanship in binding. India too has a tradition in book binding. Today, speed, quality and consistency are the hallmarks of binding done as a machine-oriented activity.

The National Book Trust is organising a Rural Writers' convention. The Federation of Indian Publishers will be organising a seminar on "Financial Management in Publishing House" and a seminar on "Successful publishing in 1984". The All India Federation of Master Printers is organising a discussion on "New Print Technology : Is it Economically Viable?". The Association of Writers and Illustrators of Children Books is organising a seminar on "Children's Literature". The Authors Guild of India will be organising a convention. The All India Type Founders' Federation would be organising a seminar. In addition there would be some memorial lectures and presentation of awards. The range and sweep of activity is only indicative of what publishing is today and some of its concerns.

India has a very rich tradition in oral learning. Today India is one of the top ranking countries of the world as far as publishing is concerned. What about the future? Shri P.V. Narasimha Rao, the External Affairs Minister, pointed out while inaugurating the Book Fair on 3rd February, 1984 : "If it is not the old stone it will have to be the new chip (micro-processor). The change over is inevitable". But both he and Smt. Sheila Kaul, Union Minister for Education and Culture, who presided over the inaugural function, opined that the new technology now available for information storage and processing would be complementary to the written word.

If the 100 school students who marched from Janpath to Pragati Maidan at the time of the inauguration of the Sixth New Delhi World Book Fair to promote book mindedness is any indication of the future "A good book is a good friend" is something which many and many more are going to discover in the years to come.

—Editor

UGC's Central Universities Panel Report

In the last three issues of University News, parts of the summary of the main observations and recommendations contained in the UGC's Central Universities Panel Report were given. In this issue we are giving highlights from the third part of the report which was carried in our last issue. The fourth and final instalment of the summary is also given.

- While considering other measures for efficient academic and administrative functioning of universities the committee recommended a regular merit promotion scheme. It has also recommended to the committee appointed to review the scales of pay of teachers to consider provision of selection grade under certain conditions.
- The UGC has been requested to work a 10-year plan for providing housing to teachers.
- The needs of the non-teaching staff would also be taken into account in the scheme of housing and medical facilities.
- The pay scales for the non-teaching staff should be taken up after the recommendations of the Fourth Pay Commission become available.
- The terms and conditions of service of employees would be recommended by a Council of Central Universities for the approval of the Central Government.
- A scheme of training be introduced for non-teaching staff.
- The functioning and the quantum and quantity of academic and research work should be reviewed by the UGC and evaluated at an interval of 5 years.
- Separate development plans should be prepared for Central Universities.
- A clearer enunciation of university authority in relation to (i) academic standards; (ii) finance; (iii) law and order; and (iv) social responsibility is required.
- The provision of Court in the Central Universities be deleted.
- The principle of election to any of the authorities of the university is unacceptable to the committee.
- The Executive Council should be a compact body and should be homogenous. The membership of the Executive Council may consist of some ex-officio academics from the university, nominees of the Visitor/UGC, a nominee of the Chancellor and, in the case of affiliating universities, some Principals of colleges. The membership may not normally exceed 13.
- Two consultative committees be set up, one for issues and matters connected with teachers and the other for non-teaching staff.
- Student participation should be in the Academi Council and in the Consultative Committees t be set up at the faculty and departmental level.
- The Academic Council should be the principa academic organ of the university.
- There should be separate Boards of Studies fo undergraduate and postgraduate studies.
- A Planning and Evaluation (Monitoring) Boar may be set up.
- Five broad functions of the proposed Council o Central Universities have also been spelt out.

The last instalment follows :

4.18 The Committee is of the view that it i neither necessary nor desirable to have a separat police for the University Campus. However it ha observed that "there is a strange hangover of th colonial period when politics of freedom was combatted with the help of the police force that university 'autonomy' is supposed to be violated if th police is called in. We believe that the police is a part of civil law and order machinery, and it should be as much available to protect life, property and functioning of the university as is available to any other establishment in the country. If the university is working normally or within defined bounds of tension naturally there is no need for the police but if it becomes disturbed by exceeding certain limits, as suggested above, the blame, if any, for causing the police to come in for protection would squarely lie with those who created the particular conditions. The autonomy of the university has no relation to this circumstance, just as the fundamental rights or privacy of a citizen are not related to his having to take police assistance in an emergency.

While we are on the subject of protecting life, property and self-regulated functioning of the university and the necessity of calling in the police in case these are threatened, we would also like to say that it is equally the duty of the police to protect life and limb as well as the property of public institutions. We have mentioned circumstances earlier when the Vice-Chancellor and other university authorities are in no position to make specific requests for police assistance. In such cases, the initiative has to be taken by the law and order machinery of the district. We are also inclined to make a suggestion that this arm of the law and order machinery should be properly trained and oriented to handle such situations with due caution and finesse, but also with firmness. Half-hearted presence of the police sometime can be counter-productive as experience has shown."

4 19. The Committee is not in favour of setting up a Central University Security Force like the Industrial Security Force, but has suggested that the universities should streamline their watch and ward arrangement. The persons engaged for this purpose should

be declared as part of essential services and enjoy all the privileges and responsibilities which go with it. It would be better that instead of permanent watch and ward staff, the universities should assign this work to an outside agency, such as ex-army mens organizations who undertake such work.

4.20 The Committee finds that Delhi University under its present Act is a teaching-cum-affiliating University and unless the Parliament modifies the Act, University and the Colleges must work within the framework of the law.

The Committee has expressed concern that if reasonable academic standards have to be maintained by Delhi University, it is necessary to decentralise its administration particularly in relation to the colleges. In support of this, it has observed as follows:

> "It has been brought to our notice that Delhi University suffers to a large extent from administrative problems of its own making. Any small problem arising in a College is referred to the University and it is expected that all decisions in such matters are ultimately to be taken by the Vice-Chancellor. This situation has grown over the years owing to demand from teachers, students and the Karamcharis of a large number of colleges that in all matters concerning their welfare the final responsibility should be that of the Vice-Chancellor—a position that, we regret to say, the University not only agreed to accept, but in several cases brought upon itself. The effect of this situation is that petty agitations of the colleges are transferred to the University and what could be a handicap for one college becomes a handicap of the whole university. This circumstance has seriously limited the growth and development of university departments as centres of excellence.",

4.21. The Committee has recommended that there should be an Administrative Council to deal with matters relating to the colleges. The Council would be presided over by full-time Chairman who may be appointed by the Visitor on the recommendation of the Vice-Chancellor and who should be the chief administrative and academic head for matters relating to undergraduate education.

4.22 The Committee is of the view that it is not a sound academic principle to hold lectures and tutorials at postgraduate level in different places without coordination between the two. It has, therefore, recommended that (a) the entire postgraduate education, except in the faculties of Medicine and Technology, and the Departments of Home Science, Nursing and Pharmacy should be the responsibility of the concerned University Department, (b) Participation of college teachers in postgraduate teaching (both lectures and tutorials) be encouraged, and (c) the responsibility of undergraduate education including honours courses should be that of colleges.

4.23 In the light of the above, there should be a separate Board of Undergraduate Studies in each subject, and separate faculties of undergraduate studies, and a Coordination Council may be provided to coordinate the recommendations of the faculties in matters of policy or those effecting more than one faculty.

4.24 Following further recommendations have been made:

(i) There should be a Common Council of Management for the colleges sponsored by Delhi Administration.

(ii) As the terms and conditions of service of college appointed teachers are identical to those of university lecturers, the broad approach for constituting the Selection Committee for them in particular for appointment of experts, be the same as suggested for university lecturers.

(iii) Some posts of Readers be provided for the colleges and recruitment to them should be made on the recommendations of the Selection Committee constituted for appointment of Readers in the University.

(iv) A provision may be made in the Act of the University for declaring certain colleges as 'autonomous' colleges as recommended by the Education Commission.

(v) A committee be appointed to review the existing grant-in-aid Rules of Delhi Colleges.

(vi) The admission policy at undergraduate level be reviewed.

(vii) The existing tutorial system for undergraduate classes in colleges should be reviewed.

(viii) The examination for the undergraduate course at the end of the first year should be conducted by the colleges concerned as part of internal assessment.

(ix) Entire undergraduate programme of Delhi University needs immediate review in the light of the guidelines issued by the UGC; and

(x) Delhi University should immediately revise the qualifications prescribed for making recruitment to the different categories of teachers, as prescribed in the Regulations notified by the UGC.

5. Political Parties

5.1 The Committee is of the view that it is neither appropriate nor practicable to lay a code of conduct for Political Parties. It has appealed to them that as in the case of facing external danger to the country they join together, they should unite in protecting the universities which have a key role in building the future of the country.

5.2 It has further pleaded that the well reasoned recommendations made by it accepted, will in itself be an act of restraint on part of the political parties. ☐

[Concluded]

Perspectives on Distance Education

G. Ram Reddy*

The concept of 'distance education', though formulated only recently, has caught the attention, if not the imagination, of educational planners all over the world. It seems to be an answer to the tremendous problems faced by countries intent on bringing the benefits of higher education to all those who desire or seek it. It was only in the thirties of the present century that distance teaching was first tried out in Australia to cover students living in remote places. Its techniques have since then been applied to higher education also in Australia and elsewhere in the world.

There are certain basic characteristics common to all distance teaching systems which differ in respect of the ways in which its techniques are shaped and used to suit the conditions obtaining in the concerned regions or countries. The fact that an "International Council for Distance Education' has come to be formed with a membership drawn from 50 countries is indicative if its being regarded as an effective alternative or adjunct to conventional education in meeting the challenges of the changing socio-cultural context.

At a recent International Conference organised by the Open University of Spain (UNED) 19 distance teaching institutions from 15 countries were represented. They included representatives of full-fledged Open Universities established in Canada, Costa Rica, India, Israel, Spain, Thailand, the United Kingdom, Venezuela and West Germany and those of conventional universities having distance teaching units situated in Australia, France, Nigeria and the United States.

The principle objective of distance teaching institutions is to widen accessibility to higher education which in conventional universities is restricted to only those who can enrol themselves in them as full-time students. In other words, distance teaching institutions aim at throwing open the portals of higher education to those who for one reason or another can carry on their studies only on a spare-time basis. Moreover, they also provide students with an opportunity of pursuing their studies at their own pace and according to their convenience and that too, from wherever they are living or staying during their enrolment.

All the distance teaching institutions have in common the objectives of bringing higher education within the reach of all those who have had no access to it helping those who wish to improve their educational qualifications without being required to join as full-time students; and helping those who are interested in pursuing advanced studies in the subjects of their interest.

The most significant characteristics of distance teaching are that it is an off-campus programme (i.e. the teaching is done not on the campus, but outside it; that it is mainly intended for adult and mature students; that its students are dispersed and not required to assemble at one place for instruction; and that its students are of varying backgrounds and age-groups.

Broadly speaking, distance teaching is done by conventional universities and independent open universities. Distance teaching was at first attempted by conventional universities with a view to helping part-time students. This is exemplified by the introduction of correspondence courses by many universities in the world which depend mainly on the print media for tuition. There are however, a number of universities such as the Deakin University of Australia which use the multi-media approach in their off-campus programmes. The distance teaching units in some universities are 'strong' while in others they are 'weak' or just 'suffered' by the conventional system. The establishment of the Open University in the United Kingdom gave distance teaching the necessary impetus as evidenced by the establishment of a number of open universities in varions countries of the world.

Most of the universities specialising in distance education adopt a multi-media approach. They make available to their students printed lessons specially designed and prepared to meet the needs of adult learners. They supplement them with the lessons that are broadcast over the radio network or telecast through television centres. In addition, they establish 'study centres' in various parts of the State under their jurisdiction to enable their students to have the benefit of face-to-face contact with tutors who do not lecture to them but clear their doubts and guide them. Significantly, the trend is towards the use of audio and visual equipment at the study centres to give further assistance to students. In fact, video cassettes are increasingly used to teach students because of their effectiveness. The 'video' can be operated at will by the student for his lessons instead of waiting to receive them only at certain appointed hours through television which might not suit his convenience. More-

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Vice-Chancellor, Andhra Pradesh Open University, Hyderabad.

over, the students can buy a video cassette if he can afford it or watch the video programme at the study centre whenever he likes to do so. This has been the experience of students even in advanced countries where the television stations are very efficient and offer wider coverage.

It is noteworthy that the course material in distance education is prepared not by one individual but by a team of writers which means that it is the result of collective thinking and discussion so necessary to ensure its usefulness.

The functioning of the course team or the modus operandi concerning the preparation of the course material varies from university to university. For instance, in some universities, they are prepared by their staff. While in some others it is done on a contract basis by outside specialists. In still some other universities a combination of these two approaches is followed. But the main point is that under this system, the course material or the book is the product of cooperative effort and team work and not what is written by an individual under the conventional system. In the process the teacher concerned profits from his interaction with his colleagues.

It is observed that most distance teaching universities make use of modern mass-media techniques to make the printed material and the study centre more meaningful. While the printed material serves as the transcript of a lecture or a lesson taught in the class, the study centre provides for face-to-face contact with the teacher which is the primary means of teaching and learning. It cannot, however, be maximised as in conventional education on account of the increased demand for part-time learning which necessitated the establishment of distance teaching universities. But the setting up of study centres is a recognition of the need to provide its students with opportunities to assemble at one place from time to time for group discussions, socialization and also to achieve a sense of belonging or being of a family. Considered in this perspective, the summer schools by which the universities set great store should prove welcome. Moreover, in places having advanced technology, telephones are used extensively by students to contact their tutors.

One of the problems faced by the distance teaching institutions is that of dropouts. It is observed that the dropout rate is higher in distance education than in conventional education for which there are various reasons. The most obvious of them is that unlike students in conventional education who for the most part are young, having no other responsibility than to pursue their studies on a full-time basis, those of distance teaching institutions have family and other responsibilities which may come in the way of their part-time studies. Some of them find it difficult to pursue their courses of study without a regular teacher. Again, the dropout rate is higher in the first few years of a university's existence than in the subsequent years. This may be due to the difficulties that the students face in switching over to a new system of education.

Wherever more than one system of education is in force, the question of parity is bound to arise. It is, therefore, not surprising that distance education has had to face the problem of parity in respect of value with conventional education. To the conservatives and to traditionalists, distance education would seem inferior to conventional education and spells a second class status. But this is not true as is borne out by the discussions at the Conference in Spain where almost every one declared that the quality of teaching is in most of the distance teaching universities, especially those which specialize in it, is very high, if not higher than that obtaining in conventional universities. The example of Deakin University shows that some of its courses like the MBA have been a great success and that its off-campus programmes attract students of high academic attainments and calibre. In recent years distance teaching institutions have been able to shed the stigma attached to distance education and rise in status and in prestige because of the efforts of Britain's Open University and other full-fledged open universities. Indeed, the conference brought out the fact that the demand for distance education is likely to grow in future since it helps people to overcome the constrictions of geography and other barriers in seeking higher education. This effectiveness is beyond question, since it employs communication technology extensively to teach them.

Considered in a world-wide perspective, distance education seems to be assured of a bright future because of 'a changing student clientele', 'a disintegrating curriculum', 'increased competition within higher education', 'the technological imperative', and such other developments. There is no doubt that distance teaching has come to stay. The problem as one of the participants at the conference put it, is "how to shape it". □

[*Courtesy* : The Indian Express]

Prof. Mukherjee Addresses Convocation of Rani Durgawati Vishwavidyalaya

Excerpts from the Convocation Address delivered by Prof. Pranab Mukherjee, Union Minister for Finance at Rani Durgawati Vishwavidyalaya, Jabalpur.

Convocation

"...We have witnessed young men and women with hopes and aspirations writ large on their faces, receiving their degrees, medals and prizes. This is the result of their relentless pursuit for excellence which meant discarding all that is mundane and unworthy of a scholar. They have earned such enviable positions by hard work and self determination to get to top, for, the place at the top is always vacant for those who strive for excellence and perfection. The pursuit for excellence and perfection is the very spirit of human soul which we should all be proud of."

"Our Prime Minister has often said: "being human we fail, we have shortcomings in whatever we do. We try to do our best; at least some of us strive towards perfection, but we are a long way off from it. But what is important in India is that we still have this ideal. And while that ideal, that bright light which has come to us from the remote past and which has been brightened by great intellects and souls, such as Swami Vivekananda and renewed again by Mahatma Gandhi and sages all over our country, is there and till it is shining India's future will always be bright." It will further be brightened if we could harness the energy of these educated young men and women in the constructive process of India's spiritual and material development.

"The first step in this process, may I suggest, ought to be that our young men and women approach the society not with a view to get what the society can offer them, but instead what they can offer to the society to meet its needs. They should provide initiative and direction to the community, which it needs in an era of rapid economic growth and fast growing awareness of democratic values. This step will open new opportunities for a better future to these young people as well as to those who have, by circumstances, been kept out of the campaign of institutions of higher learning. Such a step will increasingly involve them in the process of social change and national developmental activities or to use the phrase "transition from one civilization to another." This 'transition' could be achieved if the youth of the country are eager to change and enter the new civilization, and if they carry relentlessly the process smoothly within the framework of our democratic system.

"Transition from one civilization to another, as you know, is not a simple thing. It has taken centuries in the past. But, with the unprecedented advancement of science and technology, the definition of civilization has found new meaning. It is no longer a simple definition which enjoins on our transitional societies of new civilization, that is to create new values and new social super structures which help grow man into a perfect being with limitless possibilities of fulfilment of his hopes and aspirations. The concept of civilization in the modern world is far from man's aspirations as it has brought the world on the brink of total extinction. The so-called highly civilized man of today lives under the spectre of death and destruction. Civilization in the past have provided man with opportunities for all-round development of human personality on the principles of collective self-reliance and mutual cooperation, whereas the civilization of today has substituted collective self-reliance by inter-dependence and mutual cooperation by mutual distrust. The splitting of atom has correspondingly resulted in the splitting of the world to the extent that now it is fully prepared for a nuclear holocaust and total annihilation. There can be no escape from this so long as the world reels under the agony of neo-colonial order on the one hand and the overkill capacity of the super powers on the other, with deception masquerading as inter-dependence.

"The possible solution to this lies in establishing a New International Order and in creating a climate of confidence and trust free from fear. Our Prime Minister echoed our feelings and expressed our will when she made a stirring appeal to the Heads of the Non-aligned States at the Seventh Non-aligned Summit in New Delhi. Her words appear a real invocation to the ideals of civilization under transition. She called upon the leaders of the third world: "Let us proclaim anew our belief that Independence, Development, Disarmament and Peace are indivisible."

"The preservation of peace forms the central aim of India's policy. It is in the pursuit of this policy that we have chosen the path of Non-alignment in any military or like pact or alliance. Non-alignment does not mean passivity of mind or action, lack of faith or conviction. It does not mean submission to what we consider evil. It is a positive and a dynamic approach to such problems that confront us." These are not my words. I have borrowed them from the undying youth leader of India's destiny, Jawaharlal Nehru who, in the midst of war cries, thought of wielding Peace as a weapon to end all wars, and ever since India is marching ahead with her Peace offensives. These offensives have, no doubt, created a new climate for lasting peace in the world, but it has no less made us vulnerable to the attacks of those who with superior technology, wealth reserve and weaponry want to preserve the inequitous neo-colonial order for their gain and perpetuation of their overlordship in the world. It is against such attacks that we have to stand as one man thoroughly equipped with the ideal of peace and goodwill at home and abroad.

"The University community has a vital role to play in this strategy of peace which is an indivisible part of national development. At one time, the aim of University education was only to preserve and disseminate knowledge, that is teaching. Later research aspect was also added to teaching and thus for quite many years, Teaching and Research were accepted as the only objects of University education. I am afraid, this third dimension has not yet found much favour with traditionalists in the conventional set-up of universities, who wish to preserve the insular character of universities. This attitude is not in keeping with the present-day world. The universities have to come forward in a big way outside the four walls of a classroom to contribute to social development and change in the most effective manner. Similarly, they are expected to organise their research programmes as an integral part of the total Research and Development infra-structural set-up of the country. Disjointed or isolated research works by individuals or ad hoc research programmes taken up here and there have little relevance if they do not form a part of overall development plan which aims at welfare, security and growth. This is essential, as we have limited resources to meet the enormous challenges of a developing society. Priorities and imperatives are to be decided so that university research programmes may accelerate the economic growth and add to social well-being. In this respect, I would like to remind you about various socio-economic programmes launched during the plans and call upon you to make an indepth study of the programmes and identify the role of the university in it. I am sure you will find the task quite challenging. At the same time, you will not fail to realise that the successful implementation of these programmes would mean an emergence of a new social and economic order, a new awakening in the realm of art and culture, an addition of a new dimension to our programme of science and technology and above all, an emergence of New India of tomorrow free from the ills of the day, where she will find, her people, the immense opportunities to carry out their pursuits for excellence and perfection to the frontiers yet unknown to human mind.

"May I now seek the indulgence of this august assembly and especially of my young scholar friends to make a vow to offer the best to the cause of Peace and Development to save the world from the imminent doom and in turn find for themselves the most rewarding experience of creators of a Brave New World. May you have the courage and strength to move on this ardous path with a vision unexcelled by past generations and may you have success at every step and in every sphere you are obliged to usher in.

"Here I would like to repeat the dicta given by our ancient sages :

सत्यं वद । धर्मं चर । स्वाध्यायान
मा प्रमदः ।।

"Speak the truth, do your duty and divert not from the pursuit of knowledge but be not proud.

अश्मा भव । परशुर्भव । हिरण्मस्तृतं
भव ।

"Be hard as a stone, sharp as a blade and precious as a diamond.

शिवो भूः सखा च शूरोऽविता च
नृणाम् ।

"Be good to all, be friendly to all and be the saviour of the mankind.

"At the end, before I take my seat, I wish you to remember these famous lines of Robert Frost which were so dear to Pt. Nehru that he affixed them with his pen on the writing pad before he left us. How meaningful are these lines :

"The woods are lovely,
dark and deep
But, I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep."

Indian Council of Medical Research

The Indian Council of Medical Research (ICMR) is the national apex body responsible for the planning, coordination, implementation and funding of biomedical research in India. The ICMR has currently 18 mission-oriented permanent Research Institutes/Centres of its own, apart from Regional Medical Research Centres and Centres of Advanced Research in selected areas. The Council's priorities in research coincide with national priorities viz. communicable diseases *e.g.* tuberculosis, leprosy, malaria, filariasis, virus diseases, fertility control, nutrition (including nutrition education), metabolic disorders, primary health care, occupational and environmental health problems, other major non-communicable diseases like cancer, cardio-vascular diseases, blindness etc. In these areas, the ICMR has set up national collaborative, multicentric projects in various medical colleges and research institutes in India.

Dissemination of scientific information in the biomedical field is also an important activity of the ICMR. This is being done through monthly periodicals like the Indian Journal of Medical Research (and its supplements) and the ICMR Bulletin, as well as non-periodicals like Monographs, Technical Reports on important topic and also Proceedings of a few selected seminars/symposia apart from a number of popular publications on Nutrition, Primary health care etc.

REAL EDUCATION

R.B.K. Varma*

> "Man when perfected is the best of animals, but, when separated from law and justice, he is the worst of all, since armed injustice is the more dangerous, and he is equipped at birth with arms meant to be used by intelligence and virtue which he may use for the worst ends. Wherefore if he has not virtue, he is the most unholy and the most savage of animals." —*Aristotle*

Everybody, including the educationists, considers any improvement or revolution in education only with a view to enhance its utilitarian value. If there is an input there should be a tangible output worthy enough to serve the material needs of the student. This is the prevalent view in the field of Education. Only their material needs are taken into account whenever syllabii are framed or whenever any radical change in the structure is contemplated. It is quite unfortunate that only very rarely the 'makers' or 'reformers' of educational systems consider the spiritual needs of the students. An educated man is expected to have a well integrated personality and this fact had been stressed by our ancient educationists for whom we have scant respect. In the modern educational system, from the nursery level to the higher level, there is a complete lack of spiritual content and that surely is the reason why we hear and worry about drug abuse, indiscipline and other atrocities not only in the institutions of higher learning but also at lower levels. The health and wealth of the future generations depend entirely on the spiritual foundation on which they build up their life. No generation, whatever be its sophistication. can boast of any real progress, if it has no spiritual foundation. To achieve this aim we have to strike a perfect balance between the spiritual and material content in all aspects of education at every level from nursery to higher education. As Dr. Radhakrishnan observed, "Health, wealth, leisure and life itself which science can further are the opportunities for a higher life. Our distressed generation is obscurely aware that the present crisis is a spiritual one and what we need is a healing of the discord between the outward resources of power which are assuming frightful proportions and the inward resources of spirit which seem to be steadily declining." To redeem and recreate our civilization we need a recovery of spiritual awareness, a new and transforming contact with the inner springs of life, a sense of value.

The seeds of a healthy society are laid in its educational and religious institutions. Only when both these act and interact in harmony, there can be any real progress in society. Whereas education determines the prosperity, welfare and security of the people, religion plays an important role in controlling the brutish and selfish tendencies of a person and channelling them in the service of humanity. Any satisfactory system of education should aim at a balanced growth of the individual and insist on both knowledge and wisdom. It should not only train the intellect but bring grace into the heart of man. To achieve this we have to devise an educational system in which the inculcation of moral and spiritual values are given due place. The need of such an infrastructure was found inevitable and essential by Dr. Annie Besant, an illustrious English woman and her co-workers who founded the central Hindu College at Varanasi (the present Banaras Hindu University). For this purpose, they prepared printed, published and prescribed three text-books (1) An Advanced Text Book of Sanatana Dharma intended for college students (2) An elementary Text Book of Sanatana Dharma for the use of the higher and middle school classes and (3) Sanatana Dharma catechism for the use of small boys. The popularity of these texts during the first years of its publication can be understood from the simple fact that nearly 1,30,000 copies were sold out during the first years' of its publication. We, who live in the last quarter of the 20th century will not be able to comprehend the reason for the great popularity of these books and we will wonder at the interest shown by our predecessors in giving much importance to the education of the minds of students. They further emphasized the importance of the building up of character "a well-balanced character which will be that of a good man and good citizen." Character is destiny. "Our future destiny as a nation depends on our spiritual strength rather than upon our material wealth. The goal of perfection cannot be achieved by the weak, not the weak in body, but the weak in spirit. The greatest asset of a nation is the spirit of its people."

In ancient India the educational system was aimed at the building of character, the development of personality and the preservation of the ancient culture of the motherland. But the whole system underwent a radical change with the arrival of the English people and this resulted in a complete break with the past and even after thirty six years of Independence we still have to re-discover the roots of our ancient culture. Governments have come and gone but a radical change in our education is yet to come. So many Commissions submitted their reports but nothing substantial come off it. The Report of the Education Commission, while discussing about the indiscipline among students, listed the real causes of the widespread malady. "These include the uncertain future facing the educated young man which

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**Professor of English, S.R.N.M. College, Sattur.*

breeds frustration and irresponsibility, the mechanical and unsatisfactory nature of many curricular programmes; the inadequate facilities for teaching and learning in the large bulk of institutions; the poor student teacher contact, the inefficiency and lack of scholarship on the part of teachers; the absence of imagination and tact combined with firmness on the part of heads of institutions; the teachers politics in some colleges and universities; interference of political parties in the work of student union; the falling standards of discipline among the general citizens and their weakening civic consciousness and integrity which affect the students as well." But all the drawbacks listed above are the results of a complete lack of moral and spiritual education among the young, who are the future teachers, administtators and the creators of a progressive society. So the inculcation of right type of values among younger generations is of utmost importance.

The Education Commission (1955) felt concerned over this problem and said the education system should emphasize at all stages the development of fundamental social, moral and spiritual values. The University Education Commission (1948) considered both its philosophical and practical aspects and made certain valuable proposals for reforms. However, except in a small number of institutions, they were not implemented. In a multi-religious society like ours it is necessary to provide our students with a correct perspective of the spiritual values embeded in the teachings of different religions. This alone would develop a spirit of tolerance among the young men and women. The Education Commission suggested that, "a syllabus giving well chosen information about each of the major religions should be included as a part of the courses in citizenship or as part of general education to be introduced in schools and colleges upto the first degree. It should highlight the fundamental similarities in the great religions of the world and the emphasis they place on the cultivation of certain broadly comparable and moral and spiritual values. It would be a great advantage to have a common course on this subject in all parts of the country and common text books which should be prepared at national level by the competent and suitable exports in each religion." But, sadly enough, no educationist or educational institution in this country consider the recommendation seriously or sincerely. We have yet to realize that moral qualities are of greater value than intellectual accomplishments.

However, as we consider ourselves sophisticated and modern men, we have to re-interpret all things in the light of science and more often than not, practicability. Though the best way for inculcating moral and spiritual values is to read and understand our own scriptures, our youngsters may not do it for the simple fact that they feel it outdated! However, the health of a society depends on the mental health of its units, that is individuals. So if the minds of the individuals are educated in the proper way, we can ensure the safety of a healthy generation. There are so many techniques practised by our ancients which could be brought to life again with profit. Some of these have been re-discovered by wise men of the world and these techniques are currently in use throughout the world. Yoga and Meditation which have become a fashion among the modern men, were the two most important words in our ancient culture. As these have been given new scientific explanations these could be easily accepted by our young men who take nothing for granted. Now Yoga and Meditation are being used as the two powerful techniques to gain self-control which is the basis of an integrated personality. Since Yoga is intended for all and not for the chosen few, scientific treatment is possible and its principles, universally valid and widely appealing to all humanity, can be derived from it. Yoga does not build its edifice on blind faith but on the actual experience of its practitioner. The practitioner is called upon to cultivate faith only in his own spiritual destiny. The whole man is one of the bases of Yoga. So an opportunity should be given to our youth to experience the fruits of yogic practice by making it obligatory and this can be done only by devising an educational system in which this can be incorporated. Then there is meditation and the benefits of meditating are known throughout the world. Some of the educational institutions in America have already made it as part of academic instruction. We should also give a chance to our youngsters to taste the sweet fruits of this practice. Beyond all this one should have faith without which existence becomes unbearable. It is our bounden duty to make our youngsters aware of the immense joy that can be derived from the act of faith. If all these are given due importance in the curriculum and if all these are practised with utmost sincerity and seriousness the future of our society is safe. If every individual is able to control himself, the society will become a disciplined one. This could be done by introducing a text-book, the contents of which should include religious teachings, moral teachings, values of life, duties of a citizen, practice of yoga, practice of Meditation, need for self control and above all a concluding chapter which should be solely devoted to a discussion about the great 'utility value' of such a training. Each student should read the book and practice the teachings in the book with the full conviction that they are sure to benefit from it both materially and spiritually. To enable the students to derive full benefit from such a course it is essential that there should be some teachers who should be able to guide the students. These teachers should be given a thorough training by specialists in all aspects discussed in the text and they should be made aware of their great responsibility. Sufficient care should be taken when the text is prepared and each chapter should be written in a lucid style by specialists in the respective fields. Dr. Radhakrishnan, the great teacher and philosopher once told, "Respect for the basic values of spirit is the only antidote to the distempers of our society — social, economic and political. We must recognize that there is something in man that hungers and thirsts after righteousness." ☐

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Poona Varsity's Seminar for Research Students

One innovation introduced in the University of Poona over the last few years is an annual seminar for research students which was started in 1983. The seminar for research students aims at bringing together the various research scholars from different departments to a common platform where they can discuss their research problems and benefit from each other. The seminar, besides helping students to overcome their hesitancy in discussing their problems, was also seen as an essential part of the training of research scholars. Such exposure, would enable the research scholars to become aware of the norms and constraints of presenting research findings in a seminar forum.

Nearly 200 research scholars representing the Faculties of Arts, Mental, Moral and Social Sciences, Science and Commerce registered for the seminar held in 1983.

In the light of experience gained in organising the first seminar, the second annual seminar held on 13th and 14th January, 1984 was organized on a more structured basis. Although the number of participants this year was only 80, the participation by the teachers and various departments was of a greater order and many teachers from the faculties concerned participated as judges and chairmen for the different paper reading sessions at the seminar. All participants were required to submit abstracts of their papers followed by the full text. At the seminar each participant was given 20 minutes to present his paper which was followed by a question-answer session. Each session had two or more judges to look through the full written texts of the papers and evaluate the presentation in terms of the subject matter, organization and presentation and response to question by the research worker.

On the basis of the evaluation made by various judges in each group of subjects, the best paper was declared as a prize winning entry. All participants declared as winners of the competition under each group are entitled to attend professional conference or seminar in their discipline at the cost of the University.

Master of computer application programmes in universities

Replying to a question in the Lok Sabha the Minister of State in the Ministry of Education and Social Welfare mentioned that the following Universities have been identified for the introduction of 3-year Master in Computer Application (MCA) programme. Jawaharlal Nehru University; Delhi University; Poona University; M.S. University of Baroda; Hyderabad University; Madras University; Aligarh Muslim University; Anna University.

The Minister further said that University Grants Commission has approved, on the basis of specific proposals received from the Universities, introduction of MCA Courses in Delhi University, Poona University and M.S. University of Baroda for 1982-83 and in Hyderabad University and Anna University from 1983-84. The Course has been started by Delhi, Hyderabad and Aligarh Muslim Universities. The Poona University and M.S. University of Baroda are to obtain approval of their State Governments. The Jawaharlal Nehru University is expected to start the Course after getting the existing computer system replaced.

ISM's refresher course in petroleum production engineering

A two-week refresher course in Petroleum Production Engineering was recently organized by the Department of Petroleum Engineering of the Indian School of Mines (ISM) for the Officers of the Oil & Natural Gas Commission. In all, 23 officers of the level of Executive Engineers & Asstt. Executive Engineers from different regions of the ONGC participated in the programme.

The course mainly covered Onshore operations with a brief introduction to Offshore operations. Some of the topics like Workover Operations, Well stimulation, Artificial lift methods and Treatment of Natural Gas received greater emphasis to impart relevance to the present need of the sponsoring organization. Lecture sessions on each topic were followed by a discussion to provide opportunities for greater interaction between faculty and the participants as also among the participants themselves.

The course faculty included three officers deputed by the ONGC in addition to faculty members of the Department of Petroleum Engineering.

There are proposals for organising more courses for senior level executives of ONGC during 1984.

ISM has separately been organising since Oct., 1982 series of 3-months orientation-cum-induction programmes for freshly recruited AEE(P)'s of ONGC. Five programmes have so far been organised & eight more are on the envil.

Gujarat Vidyapith—extension lectures on Grundtvig

Prof. K.E. Bugge of Royal Danish Institute of Education of Denmark & Specialist in Philosophy of Education and more particularly on Educational ideas of N.F.S. Grundtvig gave two lectures on 16th and 17th January 1984 on the "Evolution of Educational. Thought in Western Europe" and "Relevance of the educational ideas of N.F.S. Grundtvig — a pioneer of folk-schools". The lectures were arranged by the Extension Unit of the Education Faculty of the Gujarat Vidyapith. Several teacher educators of Teacher Training Institutes of Ahmedabad attended. Dr. Bugge traced the evolution of educational thought from Greek idea of perfect man to neo-marxian idea of societal man. He also said the contribution of Gandhian ideas in this process is very commendable in as much as it distinctively pleads for an integrated man in harmony with his social obligation.

The Vice-Chancellor Prof. Ramlal Parikh presided and in his concluding remarks stressed the need for indepth study of Philosophical foundations of education. This aspect is very weak in our teacher-education programme.

A Seminar on *Education & Society* was also conducted with 20 Principals and teacher-educators of Gujarat participating in it. The seminar felt that teacher education curricula was highly fragmentive and unscientific. It recommended a working group for preparation of model curricula for teacher education in the context of social needs. The Vice-Chancellor of Gujarat Vidyapith agreed to set up such a working group.

Panjab Varsity's orientation course on eradication of illiteracy

Prof. R.C. Paul, Vice-Chancellor, Panjab University, proposed introduction of adult education as a part of the education curricula in our university system and stressed the need to reorient education system to meet the needs of development.

He said that though a big force of 3.5 million teachers was engaged in imparting formal education, the universalisation of elementary education had not made much progress. He appealed to the Principals of the colleges to formulate some special programmes for the weaker sections and illiterate women in the localities and areas being adopted by them for eradication of illiteracy.

Prof Paul was recently inaugurating a 3-day Conference-cum-Orientation Course on Eradication of Illiteracy at the campus organised by the Centre for Continuing Education and Regional Resource Centre of the University.

He stated that 431 centres were being set up by the colleges affiliated to the Panjab University for imparting adult education.

Mr. J.D. Sharma, former Vice-Chancellor, Jammu University, in his presidential remarks, said that there was an urge amongst the illiterate masses to have better life and the universities should come up to their expectations to fulfil their needs and aspirations. He expressed his happiness that the National Adult Education Programme had started making headway in the north though it was confined earlier to the south and west of India only.

Major Jiwan Tewari, Programme Coordinator, Centre for Continuing Education, Panjab University, stressed to build infrastructure of adult education in the colleges on a permanent basis to impart relevant and diversified education in a systematic and flexible way to the adults to meet their needs.

Seminar on rural industrialisation at GRI

Delivering the valedictory address of the day-long Seminar on Rural Industrialisation organised at Gandhigram Rural University on 28.12.1983, Shri A.M. Thomas, Chairman, Khadi and Village Industries Commission pointed out that the basic needs of rural masses were few and simple. Khadi and Village Industries Commission has ensured fulfilment of these basic needs to 35 lakhs of workers who are employed in Khadi and Village Industries all over India. In future also a sizeable section of the population could be bailed out of poverty through Khadi and Village Industries. Contrary to common belief, he asserted, Khadi and Village Industries are the least subsidised economic activity in the country.

He wanted Gandhigram Rural University to undertake a study in order to assess the element of direct and indirect subsidies enjoyed by different sectors of economy and by organised industry in particular. In this context he hoped for increasing collaboration between KVIC and GRI in the field of rural industrialisation.

Dr. M. Aram, Vice-Chancellor, Gandhigram Rural University presided over the valedictory session.

Nine papers were presented underlining the relevance of rural industries in the context of rural poverty and the need for leadership and managerial skill in rural industries.

The Seminar was inaugurated by Dr. M. Aram, Vice-Chancellor, Gandhigram Rural University. In his inaugural address, Dr. Aram explained the indispensability of rural industrialisation in the context of explosive growth in population. Citing facts and figures on the demographic profile of the country, he added, economic development invariably brings about changes in occupational pattern. In the West, industrialisation witnessed a steady shifting of labour force from primary sector to secondary sector and eventually tertiary sector. Now it is tertiary sector that

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accounts for the largest segment of employment in the developed countries.

New research centre for numismatics

The Indian Institute of Research in numismatic studies, an autonomous organisation offering doctoral and post-doctoral research facilities in numismatology and claimed to be first of its kind in Asia, has opened at Anjanneri near Nasik.

A Rs. 25-lakh venture by the Maheshwari Foundation of Bombay, the institute will offer research programmes for 15 scholars at a time. It has a library of rare books on numismatics and history, an exhaustive archive of photographs of coins' and proposes to set up a metallurgical laboratory and a coin museum.

Dr. D.M Macdowal, Director of the Polytechnic of London who is connected with the Royal Numismatic Society and the International Numismatic Commission, said that the potential for the study of coins would be fully utilised with the institute starting its operations.

Describing the institute as a landmark, he also said the numismatic students in India during the last one century had shaped well and the expertise available in the country was good.

Solar energy lecture at Osmania

Nobel Laureate Sir George Porter, Director and Fullerian Professor, the Royal Institution, (London), said the only possible alternative energy for the future is solar energy. He said though nuclear fission was the other alternative energy, he cautioned that uranium and other elements used might not last for more than 40 years from now.

Sir George Porter yesterday delivered the first lecture on "Photochemical approaches to Solar Energy" in the three lecture inaugural series of "Sri Pingle Jaganmohan Reddy Educational Endowment Lecture" organised by Osmania University. The Chief Justice of Andhra Pradesh High Court, Mr. K. Madhava Reddy, presided.

The Nobel Laureate said the developing countries still depended on wood as fuel but unfortunately not much attention was being paid to raise new forests. The increase in consumption of energy has led to the depletion of oil and gas which were largely depended upon now. He said the world has to depend in future on chemical substances like Hydrogen, Alcohol or ammonia which could store solar energy.

Sir George stressed the importance of photosynthesis as the miraculous reaction with which life began, continued and grew. He said the study of it was vital to understand, produce and explore use of solar energy. He said six reactions took place in a billionth (nanosecond) of a second in this reaction which was life sustaining.

Mr. K. Madhava Reddy, introduced the speaker and spoke about the endowment lecture. Mr. P. Jaganmohan Reddy, former Vice-Chancellor of Osmania University and Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University were present.

Examination House for Bombay University

The University Grants Commission has accepted a proposal of the University of Bombay to bear 50% of expenditure equal to Rs. 17.50 lakhs for the construction of an examination house. The total cost of the house is estimated to be Rs 35 lakhs. The Maharashtra Government has agreed to release a grant of Rs. 17.50 lakhs for this project.

The Bombay University conducts about 240 examinations covering more than 1,50,000 students writing 3,000 papers.

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Reservation : One post of Professor, One post of Reader and two posts of Lecturers are reserved for B.C. candidates.

Full details of this advertisement and prescribed application forms (seven copies) can be had from the University Office. Desirous candidates are requested to send Indian Postal Order of Rs. 5/- alongwith a self addressed envelope (size 28 cm. x 12 cm.) with postage worth Rs. 2.10 paise.

Seven copies of applications alongwith necessary enclosures attached to each copy of the applicaions should reach the Registrar, Shivaji University, Vidyanagar, Kolhapur-416 004, on or before **29th February, 1984.**

H.A. Patankar
I/c. REGISTRAR

AIU Participates in Sixth World Book Fair

After inaugurating the World Book Fair, Shri P.V. Narasimha Rao, Minister for External Affairs, visited the AIU Stall on Feb. 3, 1984.

The Association of Indian Universities is displaying its own and those of 28 member-universities publications at the Sixth New Delhi World Book Fair organised by the National Book Trust, India from February 4-14, 1984. The External Affairs Minister Shri P.V. Narasimha Rao who inaugurated the Book Fair also visited the AIU stall and showed keen interest in publications of universities and the AIU. The participating universities are:

1. All India Institute of Medical Sciences, New Delhi.
2. Andhra University, Waltair.
3. Annamalai University, Annamalainagar.
4. University of Bombay, Bombay.

Computer courses at Anna University

The University Grants Commission has sanctioned the institution of a Master of Computer Applications course of 3 years duration for Anna University. The course will be started from the Academic year 1984-85. With the addition of this course, Anna University will be offering the following 4 computer courses: B.E. degree in Computer Science; M.E. degree in Computer Science; Post B.Sc. Diploma in Computer Science and Application; Master of Computer Application.

New course from next session at AMU

It has been decided to start teaching Military Science from the next academic session. The scheme has already been approved by the Academic Council of Aligarh Muslim Universiy.

ALL INDIA INSTITUTE OF MEDICAL SCIENCES ADVERTISEMENT

Admission Notice

Applications are invited on prescribed form for admission to MBBS, and B.Sc. (Hons.) Human Biology Courses starting from 1st August, 1984.

To be eligible for admission, a candidate must have passed the 12th Class Examination under 10+2 system or an equivalent examination with the required subjects i.e. Physics, Chemistry, Biology and English securing a minimum of 60% (50% in case of Scheduled Caste/Tribe Candidate) in aggregate for M.B.B.S. and 50% marks in aggregate (45% in case of Scheduled Caste/Scheduled Tribe) for B.Sc. (Hons.) in Human Biology Course.

LAST DATE FOR RECEIPT OF APPLICATIONS IS 29TH FEBRUARY 1984

The application forms with prospectus can be obtained from the office of Registrar (Academic), All India Institute of Medical Sciences, New Delhi-110029 on requisition accompanied by a crossed Indian Postal Order for Rs. 5/- payable to the Director, AIIMS and a self addressed envelope of 10" x 6" size or can be obtained personally only against a crossed Indian Postal Order for Rs. 5/- on any working day from the office of the Registrar (Academic), A.I.I.M.S.

Cheques, Money Orders, Cash and other forms of payment will not be accepted. Requests received upto **21-2-1984** latest for despatch of application forms by post will only be entertained. However, applications can be obtained from Reception Counter, A.I.I.M.S. till **29th February, 1984.**

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22. North Eastern Hill University, Shillong.
23. Osmania University, Hyderabad.
24. University of Poona, Poona.
25. University of Roorkee, Roorkee.
26. Shivaji University, Kolhapur.
27. Tata Institute of Social Sciences, Bombay.
28. Vikram University, Ujjain.

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Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

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THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

HUMANITIES

Philosophy

1. Biswas, Bijan. *The nyaya theory of perception: An epistemological study.* U Calcutta.

2. Pandey, Gorakh Prasad. *An examination of concept of alienation in existentiatism.* JNU, Delhi.

3. Rajamohan, S. *Social concern in Indian philosophy: A Study.* Calicut U.

Religion

1. Hisamitsu, Rie. *A critical study of the Paramaitha-Vinicchaya.* U Delhi.

2. Mandal, Himangshu Kumar. *The Mahabharata of Dvija Kaviraja (Udyoga Drona, Gada Parvans).* NBU, Rajarammohunpur.

3. Sobti, Harcharan Singh. *The concept of Nibbana in early Buddhism.* U Delhi.

Fine Arts

Drawing & Painting

1. Upadhyay, O.D. *A comparative study of the art of Ajanta and Sopocani.* U Raj, Jaipur.

Music

1. Khare, Asha. *Bundelkhandi lok geet shastriya sangeet ke drishtikon se.* RDV, Jabalpur.

2. Yadav, Jai Singh. *Haryana ka lok sangeet : Ek adhyayan.* U Delhi.

Language & Literature

English

1. Dinesh, Kamini. *A study of the theme of martyrdom in Samson Agonistes' Prometheus Unbound, St. Joan and Murder in the Cathedral.* MSV, Udaipur.

2. Rama, R.P. *A study of the dramatical writings of W.H. Auden.* U Raj, Jaipur.

3. Ray, Amal Chandra. *Robert Louis Stevenson's art of fiction.* U Burdwan.

4. Satya Nand. *Dimensions of realism in modern Western drama and their impact on Punjabi drama.* Pb U, Chandigarh.

5. Sivadasan, C.P. *Linguistic experimentation in contemporary Indian verse in English : A study in comparative stylistics* Calicut U.

Sanskrit

1. Acharyya, Haripada. *Chandralok-Kuvalayananda-sameekshanam.* U Burdwan.

2. Bargale, Meenakshi. *Kautilya Arth Shastra kee rajya vishyak manyataon ka poorvvarti vichardharaon ke pariprekshya mein samalochnatmak adhyayan.* RDV, Jabalpur.

3. Biswas, Rita. *Studies in the poetical works of Mm. Haridasa Siddhantavagisa.* U Calcutta.

4. Chaudhry, Kum Kum. *Meghaduta kee pramukh tikaon ka tulnatmak adhyayan.* U Delhi.

5. Devpura, Usha. *Shri Sitaram Bhatt Parvarnakar ke mahakavyon ke sandarbh mein nrip vilas: Mahakavyon ka adhyayan evam sampadan.* U Raj, Jaipur.

6. Jha, Mahesh Chandra. *Vasant Vilas Mahakavya : Ek sameekshatmak adhyayan.* LNMU, Darbhanga.

7. Kumar, Shashi Prabha. *Vaisesika darshan mein padartha nirupana.* U Delhi.

8. Mishra, Rashmi. *Shri Gopinath Shastri Dadhich kee krition ka samalochnatmak adhyayan.* U Raj, Jaipur.

9. Nagaich, Sushil Kumari. *Vivekanand per sanskrit mein rachit kavya sahitya ka samalochnatmak adhyayan.* RDV, Jabalpur.

10. Saini, Sudesh. *Concept of reality in Advaita Vedanta.* Pb U, Chandigarh.

11. Sharma, Hari Datt. *Realism, logic and metaphysics of nyaya-vaisesika.* Pb U, Chandigarh.

12. Sharma, Purushottam Datt. *A study of the Siddhanta Bindu of Madhu Sudana Saraswati.* Pb U, Chandigarh.

13. Shukla, Kamal Narayan. *Madhurya Kadambini ka sampadan evam samalochnatmak adhyayan.* RDV, Jabalpur.

14. Tripathi, Roop Narain. *Shri Sitaram Bhatt krit Nal-vilas Mahakavya ka sampadan evam samalochnatmak adhyayan.* U Raj, Jaipur.

Prakrit

1. Jain, H.C. *A critical edition and study of the Rayanachudaraya-chariyam of Nemichandra.* MSV, Udaipur.

Pali

1. Barua, Hemendubikas. *Buddhism and Buddhists of West Bengal.* U Calcutta.

Hindi

1. Bhardwaj, Pravina. *Bachchan: Vyaktitva aur kavya chetna.* SNDT, Bombay.
2. Bhatnagar, S.P. *Rajasthan kee samkaleen hindi kahani.* MSV, Udaipur.
3. Billa, Sita Rani. *Dushyant Kumar aur unka sahitya: Swatantrayottar vishisht kavya dhara ke sandarbh mein.* RSU, Raipur.
4. Brajnandan Kishore. *Ageya kee kavita mein vastu evam shilp ka swarup.* LNMU, Darbhanga.
5. Chauhan, Karan Singh. *Hindi mein pragatiwadi andolan ka alekhatmak itihas.* U Delhi.
6. Chauhan, Ratan Singh. *Amritlal Nagar ke upanyason ka samasyamulak anusheelan.* MSV, Udaipur.
7. Deo, D.N. *Hindi ke Radha vishyak adhunik kavya.* MSV, Udaipur.
8. Dubey, Sukanya Kumari. *Amrit Rai ke katha sahitya ka sameekshatmak adhyayan.* SPU, Vallabh Vidyanagar.
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12. Kapur, Madhu. *Acharya Amirdas rachit Sri Krishna-Sahitya Sindhu ka pathalochan purvak sampadan.* Pb U, Chandigarh.
13. Lazarus, Daniel. *Chattisgarh mein uplabdh Kabir panthi sahitya ka anusheelan.* RSU, Raipur.
14. Pachauri, Sudhish. *Nai kavita kee rachna prakriya aur artha prakriya.* U Delhi.
15. Pramila Kumari. *Sagun bhakt kaviyon ka matritva darshan aur vatsalya nirupan.* Mag U, Bodh Gaya.
16. Samuel, Kuchipudk. *Sathottar hindi aur telugu upanyason mein moolya sandarbha: Samaj shastriya adhyayan.* Andhra U, Waltair.
17. Sasheendran, P. *The contribution of A.I.R. in promoting hindi as a link language: Achievements and possibilities.* Calicut U.
18. Saxena, Manorama. *Ramcharit Manas aur samritiyan.* RSU, Raipur.
19. Sharma, Babu Lal. *Swatantrayottar Hindi kahani: Mulya parivartan kee prakriya aur swarup.* U Raj, Jaipur.
20. Sharma, Pushpa. *Prasadottar natya sahitya mein nayika swarup.* U Raj, Jaipur.
21. Sharma, Vimal. *Swatantrayottar hindi kahani mein nari ka swarup.* MSV, Udaipur.
22. Shukla, Santradevi. *Ritikaleen kavya mein Krishna bhakti ka swarup.* Nagpur U.
23. Shukla, Sunanda. *Adhunik hindi mahakavyon mein avtarvad kee sankalpana.* U Raj, Jaipur.
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Smt. Sheila Kaul, Union Minister of State for Education, speaking on the occasion of laying the Foundation Stone of the New Guest House at Aligarh Muslim University. Seen in the picture are (L to R): Mrs. S.S. Grewal, Education Secretary, Shri Saiyid Hamid, Vice-Chancellor and Prof. Mohd. Shabbir, Pro-Vice-Chancellor of the University.

KARNATAK UNIVERSITY, DHARWAD

No. KU/BOA/ADVT/84/593 Dated : 19-1-1984

ADVERTISEMENT

Applications in the prescribed form (seven sets) are invited for the following posts so as to reach the undersigned by Registered Post A.D. on or before **1-3-1984.**

Number of posts, scales of pay with usual allowances as per University rules and reservations.

Subject	Name of Post and Scales of Pay	Reservation	Name of the Dept.
1. Linguistics	Reader (Rs. 1200-1900)	S.C.	Institute of Kannada Studies, K.U.D.
2. Kannada (Jaina Literature)	-do-	B.C.M.	-do-

QUALIFICATIONS

Reader

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teachnng materials.

About five years experience of teaching and/or research provided that atleast three of these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding research work.

"**Good Academic Record**" means as under:

(i) A candidate holding a Ph.D. degree should possess at least a second class Master's degree; or

(ii) A candidate without a Ph.D degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

Application forms can be obtained from the Director, Prasaranga, K.U. Dharwad, on payment of Rs. 4/- per application; Rs. 28/- per set (seven applications) in person or by sending a Crossed Demand Draft of Rs. 28/- + Rs. 2/- for postage payable to the Finance Officer, K.U. Dharwad.

Knowledge of Kannada is Desirable

Appointment to the posts may be permanent depending upon the natutre of the vacancy and the requirements of the University. In such cases, they will be on probation for one/two years according to the rules of the University.

Candidates selected for the above posts, may be posted in the beginning or at a later date to work either at Dharwad or at any of the P.G. Centre(s) though the posts are shown as existing at a particular place at the time of advertisement.

If candidates belonging to Scheduled Caste, Scheduled Tribes, Backward Tribes, Backward Communities, Backward Caste, and other reserved categories are not available the said vacancies will be filled up in accordance with the latest Govt., instructions in this behalf. Applicant belonging to Scheduled Caste/Scheduled Tribe (Form-1); Backward Communities, Backward Caste/Backward Tribes in (Form-2) and to the Special Group (Form-3) are required to produce a certificate in the **prescribed form issued by the authorities empowered** to issue such certificates in support of their claims along with their applications. Such certificates should not have been issued **earlier than one year by the competent authorities**, empowered to do so.

In addition to the posts reserved for Scheduled Caste and Scheduled Tribe preference shall also be given to persons belonging to Scheduled Caste/Scheduled Tribe in respect of even the vacancies persons possess suitable qualifications.

The entitlement of a person to be eligible for appointment against the quota "other Backward Classes" shall be determined not just on the basis of a caste certificate but rather on the basis of a caste-cum-income certificate, which would include **income of his own** together with that of his parents and if either of the parent is dead, of his legal guardian.

Age limit to apply for the said posts below 50 years.

To count one academic year as one year teaching experience.

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Instructions to the candidates

1. Canvassing directly or indirectly would disqualify the candidate.
2. Incomplete applications are liable to be rejected.
3. The number of posts specified above is subject to variation depending upon the needs of the University.
4. It is open to the University to fill-up or not to any of the posts now advertised.
5. Application fee once remitted to the University is not refundable under any circumstances. Separate application along with enclosures is required to be submitted for each post. One set of application cannot be considered for more than one post.
6. No T.A./D.A. will be admissible either for attending the interview or for joining the post if selected.

REGISTRAR

UNIVERSITY OF DELHI

Advt. No. Estab. IV/86/84
Dated the 3rd February, 1984.

Applications are invited for the post of Controller of Examinations in the University.

Scale of Pay: Rs. 1500-60-1800-100-2000.

The post carries D.A., H.R.A., C.C.A. and other allowances as admissible under the rules in force in the University from time to time.

Qualifications

Essential : A Second Class Master's degree and experience of conducting University Examinations and other allied work at the executive level for atleast 10 years and having record justifying entrusting of confidential work.

Desirable : Experience of University administration and familiarity with the working of University bodies and institutions.

The prescribed application form can be had from the Information Section of the University, either personally or by sending a self addressed envelope with postage stamps worth Rs. 3.45 p. to the undersigned.

Selected candidate will be required to produce original documents relating to their age, qualifications, experience, etc. before joining the appointment.

Applications, accompanied by attested copies of degrees and other certificates etc., should reach the undersigned not later than **29-2-1984.**

Note: 1. Relaxation of any of the qualifications may be made in exceptional cases on the recommendation of the Selection Committee.

2. Canvassing in any form by or on behalf of the candidate will disqualify.

Madan Mohan
REGISTRAR

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Editor :

M.S. RAMAMURTHY

Seminar on Reservation Weaker Sections of Society

Reservation for the weaker sections of society in educational institutions has drawn attention of politicians and academics for quite some time. Indeed, Article 46 of the Indian Constitution enjoins that "State shall promote with special care the educational and economic interests of the weaker sections of the people and in particular of the scheduled castes and scheduled tribes and shall protect them from social injustice and all forms of exploitation". This signifies the deep commitment of the Nation to take special care for them. In this context, at the instance of Visva Bharati, the Association of Indian Universities at its meeting held in Kanpur considered the question of reservation of seats for weaker sections of society in Indian universities. After considerable discussion, it was thought proper to devote more time to this important issue. It was therefore suggested that zonal seminars be held to discuss the matter further before formulating any guidelines.

Accordingly, seminars were organised in Santiniketan and Pune. The Seminar for Southern Universities was held at Tamil University, Thanjavur on December 14 and 15, 1983. Wide ranging discussions were held. The position and status of tribes and scheduled castes in Punjab, Tamilnadu, Kerala, Karnataka, Andhra Pradesh and Nagaland were discussed. Hon'ble C. Aranganayagam, the State Education Minister and Pro-Chancellor of Tamil University had sent his inaugural address as he could not come to Thanjavur.

Shri P.S. Habeeb Mohamed, VC, Kerala; Dr. M. Aram, VC, Gandhigram Rural Institute; Shri G.B.K. Hooja, VC, Gurukula Kangri: Shri T.N. Jayachandran, VC, Calicut; Prof. S.V. Chittibabu, VC, Annamalai; Dr. J.S. Grewal, VC, GNDU; Prof. P.V. Indiresan, Director, IIT Madras and a number of academics from the neighbouring universities participated in the seminar. The Association of Indian Universities was represented by its Joint Secretary, Shri Anjni Kumar. Prof. V.I. Subramoniam, Vice-Chancellor, Tamil University while welcoming the participants said that the university system has two models before it, namely, the reservation model and the non-reservation model followed in socialistic country. It was for the seminar to suggest how best to tackle the problem. He referred to the recent progress made in Tamilnadu for the development schemes for weaker sections of society and appreciated the continued assistance of the Chief Minister for organising different welfare schemes for the benefit of masses. Prof. Chittibabu, VC, Annamalai in his address referred to the continued efforts of the Tamilnadu in attracting the students of scheduled caste and scheduled tribe in large numbers for various academic programmes and the recent allocation of 150 crores for the nutritional meal schemes in the schools which had immensely helped the children of weaker sections in continuing their studies.

Shri Anjni Kumar, while proposing a vote of thanks, said that after the four regional seminars have been conducted, there will be general discussions at the Annual Meeting of AIU to be held at Shillong to formulate the guidelines for achieving equality of all segments of the Indian population.

The following resolutions were adopted by the Seminar:

(1) In the existing social, economic and political conditions, though caste based reservation is a practicable remedy, it should be reduced progressively after assessing (a) the benefits enjoyed by each community/caste and (b) the courses and professions in which optimum benefits have been enjoyed by the reserved groups.

(2) In such courses where reservation leads to denial of entrance to candidates with adequate and required qualifications, and marks, the increase of the number of colleges/seats be considered by educational agencies.

(3) Since reservation in higher education should not affect the standards of education and training, steps should be immediately taken to improve the feeder channels like school education

Second World War, was the introduction of the jet engine, which has led to the present significant intercontinental traffic based on wide-bodied jet aircraft. The resultant mass transportation has indeed made the world a small place physically, and has had, and will have, tremendous social consequences through the inter-mingling of communities. The cause, or the exogenous factor, has arisen from science and technology, but the long range implications will be sociological.

Communication and Information

"From the early periods characterized by physical movement of information by relatively slow modes of transportation (men used as runners, horses, road and rail systems), we have moved through telegraphy, telephony, the radio and television to satellite-based systems of the modern age. Information transfer is through the movement of electrons and of electromagnetic radiation. There has been a succession of revolutions, or indeed a continuing revolution, in the field of electronics underlying this area. From the valve-based radio and television sets we moved into the area of solid state electronics after the Second World War. Each decade thereafter saw a major transformation : from the transistor to integrated circuits, to successively higher levels of integration through small-scale to medium-scale to large-scale and now to the very large-scale integrated circuits. Electronics equipment has become smaller in weight and volume, requires less power, is more reliable, has enormously greater capabilities and versatility, and costs much less for the performance it delivers. These developments have resulted in the many apparently separate fields of computers, communications and space technology coming together in a mutually dependent and integrated manner.

"There is now a continuous spectrum of computing capability from the hand-held calculators upto the large computers. Large volume data can now be moved around over communications lines. Communication is becoming increasingly digital and electronic in character. With the developments of space technology and the availability of geo-stationary satellites, radio and television networking and telecommunications have now become possible over inter-continental distances. This has resulted in instantaneous global communication for transmital of information and ideas. Human aspirations are no longer confined to those of a small community. It derives from what obtains elsewhere in the world. It is thus that we live today in a world of electronics, communication and information. These developments have profound sociological implications.

The Nuclear Age

"The nuclear age dawned when humankind moved from energy measured in electron volts, characteristic of chemical reactions, which only involve atomic and molecular re-arrangements, to energies measured in millions of electron volts arising through transformation of mass into energy. One cannot but emphasise that a factor of million is very large for a single step. When the first atomic explosion took place at Alamogordo, the thought which came to the mind of Robert Oppenheimer, who was incharge of the project, was a passage from the Bhagavat Geeta: "If the radiance of a thousand suns were to burst into the sky, that would be like the splendour of the Mighty One" and when he saw the sinister and gigantic cloud he was reminded of another line, "I am become Death; the shatterer of the worlds": indeed, how close to the truth was this reaction, as we know from developments since then. We have come a long way in the almost four decades that have elapsed: with the possibility of major contributions to electric power development to meet the energy demands of the world through nuclear reactors and the vision of what would be, in today's context, unlimited power, through thermonuclear fusion in the not too distant future.

The Space Age

"Humankind entered the Space Age with the launching of the first Sputnik by the Soviet Union in 1957. Since then there have been spectacular achievements, including the landing of man on the moon in the U.S. Apollo missions, the exploration of Mars, Jupiter, Saturn and Venus, a manmade object moving out from within the solar system into the outer reaches of space, reusable shuttle based satellite launches and the now regular application of space technology for tele-communications, television and remote sensing.

The Age of Biology

"Man has probed deep to understand the living state at molecular and cellular levels. These discoveries in the life sciences have led many to proclaim that this is the Age of Biology. It was after the Second World War that, using the tools of X-ray crystallography, it became possible to determine the structures of complex biological molecules. A profound discovery related to the structure of DNA and the genetic code. Since then exciting work has continued over the past quarter of a century with a stream of understanding pouring out. Techniques were developed for rapid analysis of complicated bio-molecules. Amino acid sequences and nucleotide sequences can now be determined very rapidly. The first gene was synthesised in 1964, but it is only during 1978-79 that it became possible partially to synthesise the genes responsible for the production of insulin and the human growth hormone. This became possible with the discovery of enzymes capable of cutting DNA at precise sites, of enzymes capable of sealing the loose ends, and of those which could synthesise DNA from messenger RNA. In 1979 it took two years to synthesise a gene with 120 nucleotides, and by 1981 the same job could be done by a machine in three days. There are many exciting implications arising from this new area of genetic engineering. Apart from already accomplished aspects such as the synthesis of insulin or of interferon, one has the possibility of identifying genes with specific characteristics which can then be introduced where required; for example, in agriculture, it may be possible to transfer nitrogen-fixing genes of certain bacteria to certain plants, as also introduce in a number of different crops specific genes responsible for improved yields and pest-resistance. There are innumerable applications opening up in medical science and industry. Biotechnologies born out of this new understanding and advances in modern biology are now poised for a major thrust.

Other Areas of Science

"I have only dealt with some areas of spectacular advances in science and technology. This is not meant to be a comprehensive account. For example, I have not covered the new frontiers in chemistry, in oceanography and our understanding of the solid earth. Great discoveries have been made recently relating to the micro-structure of matter and the fields and forces concerned; in particular there is a unified theory to cover electro-magnetic and weak interactions and we are probing for a grander unification to include the strong interactions. One can continue with such an account of the spectacular march of science. Apart from spectacular, there are a very large number of important, and often commonplace, elements that are based on scientific discoveries and their applications, which are part of daily life. Thus, plastics, synthetics, the transistor radio etc. are common the world over including the most remote areas. There have been great advances in medical sciences with modern antibiotics and miracle drugs. One can clearly see the impact of these in the reduction of death rates and increased expectancy of life all over the world, including the less developed countries. It is this which has given rise to the steady increase in world population. There have been great advances in the field of agriculture which has enabled food production to keep pace, to some extent, with the increase of population; this is as yet, without recourse to the spectacular developments in the new biotechnologies.

All of what I have stated clearly bring out that the development of science over the past few hundred years, and more particularly, the spectacular discoveries and applications since the Second World War have transformed the world in radical fashion. The fabric of our civilisation has already changed enormously in our own life time. It is changing more rapidly, from year to year, and will continue to do so.

The human condition

"One would have thought that with the knowledge, power and capabilities that are with us today, and which continue to grow as a result of advances in science and technology, the world would be, in some sense, an Utopia. But the human condition that we see around us is far from this.

The Nuclear Threat

"First, there is greater insecurity in the world than ever before. Over the past decade the cumulative world military expenditure has mounted to something like 5,500 billion dollars. Conflicts continue to be an essential component of human existence. The nuclear stockpile in the world consists of around 50,000 weapons, some of which have yields a thousand times greater than the bomb that destroyed Hiroshima. We are now aware that, apart from the immediate death of many hundreds of millions of people, and injuries to as many, in a nuclear war, through blast, fire and radiation, and the continuing highly hazardous radioactive fallout, there are phenomena earlier not visualized that could endanger the very survival of life on earth as we know it today; this is because of the enormous amount of soot arising from firestorms that would result from any nuclear exchange of around 300 megatons or larger. This soot will spread on global scale, involving the troposphere and stratosphere, in the northern as well as southern hemisphere, lowering temperatures significantly everywhere and cutting out light by a factor of a hundred thousand to a million; the result would be a very cold and dark surface of the earth, inhospitable to present life forms. It cannot be said that nuclear war will affect only those who are engaged in it as some would assume. It is essential for all humankind to understand that a nuclear war is a global disaster; those responsible as well as innocent bystanders will all be affected. This issue has been brought up and publicised at many forums, particularly in the developed countries. A true appreciation of the nuclear volcano on which we are sitting, which might blow up at any moment, is very insignificantly appreciated in our country.

MAR 1984
C.F.T.R.I., MYSO

An Unequal World

"The world we see around us is one of gross inequalities between nations and within nations. It is terribly imbalanced in terms of income and consumption. The richer countries with only a quarter of the world's population account for four-fifths of the world's output. By and large, the developing countries have been, and continue to be, producers and exporters of primary raw materials for which the prices have always been determined and continue to be determined by the advanced countries. They are, therefore, aware that they have to greatly step up endogenous activity to transform primary raw materials to semi-finished or finished products; this calls for sustained industrialisation. At the Lima Conference organized by UNIDO in 1975 a target was set that the developing countries must attain a share of 25% of world industrial output by 2000 A.D. It is with this in mind that the developing countries have argued for a better climate for transfer of technology; and for international programmes that would support the endogenous efforts of the developing countries themselves to grow their scientific and technical capabilities. With respect to the latter, Homi Bhabha had remarked "What the developed countries have and the underdeveloped lack is modern science and an economy based on modern technology. The problem of developing the underdeveloped countries is therefore the problem of establishing modern science in them and transforming their economy to one based on modern science and technology".

"The developing countries have consistently demanded the creation of a new International Economic Order: based on equity, sovereign equality, a full appreciation of the inter-dependence that now exists in the world, common interest and co-operation among all states, irrespective of their economic and social systems. All that one sees around today, in terms of trade, commerce, financial arrangements and human attitudes are attempts to continue with past practices, for short-term gains of limited groups, communities or countries. The world, which has become small physically as a result of modern transportation and communication, which is so highly interdependent, which has been transformed so significantly in terms of capabilities and opportunities through advances in science and technology, will require new organisation forms and basic changes in human value systems. Those who are well-off today, whether it be groups within countries, or as whole parts of world, will have to recognise that their future well-being will depend on improvement in the standards of those not so well-off. What is called for is co-operation, not confrontation?

"In a moving address to the Pontifical Academy of Sciences recently (12th Nov. 1983), Pope John Paul II said "Peace is born not only from the elimination of hotbeds of war. Even if all these latter were eliminated, others would inevitably appear, if injustice and oppression continue to govern the world. The intention to direct science to the promotion of justice and peace demands a great love for humanity. Every human virtue is a form of love. This is the case, in particular, of justice, which is love of neighbour, of individuals, and of peoples. Only the person who loves wants justice for the other person. The person who does not love seeks only to obtain justice for himself".

"With regard to the glaring global inequalities that exist, one can go into great deal on what needs to be done: such as embarking on global negotiations: more aid from the developed to the developing countries; availability of funds on a concessional basis; better commodity pricing; less protectionism by the developed countries in respect of products from the developing countries; easier and more equitable access to technology; and so on. These have been discussed at great length at many international forums and I shall not go into these here. What is fundamental is a recognition of the need for a new framework and new attitudes.

Science and Technology for Development

"When one considers science and technology, there are many aspects of special relevance to developing countries. Here again one can go into great details, but I shall not. These would relate to the problems of: population stabilisation, and enhancing food production, using strategies which extend the potential based on present knowledge and techniques, and phasing in of new possibilities arising from the developments in modern biology; (in particular one would have to work towards energy-efficient high-yield agriculture). One of the crucial areas for the future relates to energy where the world has been passing through a crisis situation that drew attention, with a jolt, to the importance of energy as a prime requirement for life and development, the non-renewable nature of oil and thereafter, of coal, on which we depend so significantly today, and the extent to which developing countries, including India, depend so significantly on non-commercial energies. There can be no complacency with regard to the question of meeting the energy needs of the world and of developing countries, in particular. There are major areas of health specially encountered in developing countries, such as communicable diseases, probler arising from malnutrition a insanitation and so on. The is need to work out strategies f rapid development in harmor with the environment. All these constitute the enviror ment of developing countrie where major challenges exis that demand scientific inn vation and capabilities at th very frontiers of present know ledge and capability. It is in find ing solutions to such challengin problems, with deep motivatio from within, that scientists ar led to great discoveries.

"However, on an overall basi one encounters two major problem areas in the world today one—the threat of a nuclear holocaust, arising from the confronta tion between the super powers a situation which has its roots in mistrust and suspicion; the other—the major global inequalities arising out of approaches rooted in the past based on narrow loyalties, greed and selfishness. There are no solutions within the realm of science and technology for either of these two major problem areas. Science and technology will continue to advance, as I have indicated earlier, and we will need these advances to deal with many of the problems amenable to technical solutions. But to deal with the two overall problem areas that I have indicated, what we need is, and I quote Prime Minister Smt. Indira Gandhi: "The mind has to put aside the fragmentary utilitarian approach, and to look anew at the earth, the matrix of human heritage. Its problems are global and have to be so viewed. This is possible only when man symbolically opens his hands in a gesture of fearlessness and sharing."

"I hope that in the life that lies ahead of all of you who are graduating from this University today, beginnings would be made for a more meaningful tomorrow, where mankind will acquire the wisdom to live in happiness together, and to benefit from the enormous powers acquired through the process of disciplined logical reasoning which has given rise to science." □

Planning of Technical Education for Future Development : Indian Perspective

Biman Sen*

Technical Education is an integral part of the total system of education which is responsible for development of human resources for socio-economic development of a country. To understand the problems related to the scientific planning of technical education for future development, it is necessary to consider certain basic questions and fundamental facts.

The first question to be considered is—"What is future?" Unless it is quantified in the time dimension, 'future' remains only an abstract concept indicating an event or phenomenon yet to happen or take place. Therefore, whenever a question of future development of any sector of human activity is considered, there is a need for indicating a fixed timeframe. While considering the future development of technical education, for longterm planning, one should consider a timeframe equivalent to the working life of an average technical person, which is roughly about forty years according to the existing situation.

The second question is that "what is future development"—in the context of technical education? Development is a very complex process involving all the sectors of human activities which are interlinked and inter-dependent forming a closed system. Therefore, development of any single sector of human activity cannot be considered in isolation as the development of any particular sector has a direct or indirect impact on the other, which may be of positive or negative in nature. In view of this, a balanced approach is necessary, while planning for development of any particular sector. As for example, development of technical education is very much dependent on techno-economic and industrial development of the country, which, in turn, is dependent on various other factors.

The third question which needs consideration is "What is meant by planning"? It is a complex exercise. It involves a series of decisions for future action, to be taken on the basis of certain information available, not only on the area of development, but also on some information on the allied areas of activities. In addition, in some cases, one has to take into consideration some predictable or projected information based on certain trends of development in other areas or elsewhere in the world. At a certain crucial stage of development, the predictable or projected information may be more relevant for planning than the information actually available, which may, however, serve as a base for evaluating the state of prevailing situation for determining precisely the gap between existing status and the final goal to be achieved. For scientific planning, one should have a clear objective and a definite goal to be reached within a timeframe determined for the purpose. Pandit Jawaharlal Nehru said "Planning is a continuous movement towards desired goals".

Scientific planning should lay down the priorities between various sectors of activities in a sequential manner with reference to ultimate objectives and goals keeping in view the process of balanced development.

For example, the main objective of agricultural development is to increase food production and the ultimate national goal is to become self-reliant in food. Short-term goal can be achieved, either by increasing production by bringing more and more land under cultivation or by increasing productivity through application of science and technology. If, the first option is adopted for achieving short-term goal, it can be achieved only by disturbing the ecological balance and by denuding forest wealth of the country which may cost the country dearly in the long run and ultimately the very objective may be defeated, and the ultimate goal may not achieved at all. On the other hand, if the second option is adopted, it would need a sound industrial base and infrastructure to support agricultural development in a sustaining manner. In the long run, the second option will achieve the ultimate goal and objective. Unfortunately, so far, India, in this respect, had adopted the first option which has led to large scale soil erosion, flash floods and drought etc. Thus the country is now paying heavily for the mistake in planning in the past.

To achieve the ultimate objective and goal, there is a need for long-term planning (perspective planning) supported by short term action plans to bridge the gap between the prevailing situation and the ultimate goal in the shortest possible time. For this, continuous evaluation and monitoring for reassessing the situation is essential to correct the draft, if any, or to review the goal itself.

For scientific planning of technical education for future development, there is a need for studying the growth of technical education in its historical perspective.

Technical education owes its existence to the industrial revolution, rather it is a byepsoduct of

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Executive Director, International Educational Consortium.

industrial development. In fact, it was started as an education system, specially devised for industrial workers and gradually assumed the present stature. Thus, Technical education is a tailor-made educational system specially devised for industrial development. It is a part of the total development process closely related to techno-economic environment. Therefore, its development is influenced by longterm industrial and economic policies and goals, which in turn, depend on the national security policy, and on foreign and technology policies etc. Over and above, planning of technical education for future development cannot ignore the fast changing scientific and technological environment in the world and the national compulsion and constraints.

Another factor that should be kept in mind is that the time gap between scientific discovery and technological development is vanishing very fast.

Considering various factors, if technical education has to serve its purpose, it has to be tuned to the changing requirements of industrial situation created by technological changes which influences the production techniques and processes. Therefore, the planners of technical education should have a clear perception of the future needs on the basis of national commitments, both internal and external, continuous study of the changing trends in the international situation and worldwide industrial and economic development.

Scientifically speaking, economic development should not be measured in the term of increased production, but be measured in the terms of increased productivity through continuous upgrading of technology, which can olny be achieved, by continuous upgrading of the education and training system responsible for developing the key resource namely, human resources.

If we analyse, the present technological environment and its changing trends, two areas of technology show faster development than others: one, because of the energy-crisis created during the past decade major efforts for technology up-grading are, at present, devoted to development of energy-economising processes and alternative sources of energy specially development of renewable sources of energy. The second area is electronics, which is responsible for a major technological revolution. Computers and micro-processors have revolutionised entire production processes and their uses have extended from average household and a small industrial or business enterprises to running of most sophisticated process industry and big atomic power stations etc. In fact, micro-processors will soon transform not only the entire production system, but also streamline, the infra-structures. It may even revolutionise the entire educational system.

India, cannot ignore the realities of today's technological environment and shut its doors anymore to the technological changes which are sweeping all over the developed world. In fact, India has already opted for high technology for developing its industrial base and the infra-structure required for supporting it. The technology policy declaration has given a clear green signal for this new approach to future development. It has no option but to do so, for mere survival in the fast changing global geo-political and techno-economic situation, and in a world of competitive markets. The present situation demands a high degree of national security consciousness and defence preparation. This will need a highly sophisticated industrial base and other infra-structures. The country has already entered in a big way in the realm of highly sophisticated technology areas like aero-space technology, nuclear and computer technology and other areas. Within next ten years, unless India enters in a big way in the field of electronics with special reference to micro-processors and computers and other electronic control systems, the country's entire progress will siagnate and slide back towards technologically medieval age. All these activities will need a massive expansion and support of the research and development system both at the level of academic institutions and technical establishments. Such a R & D system cannot be built up or sustained without a sound system of forward looking technical and science education. Rather, it may be correct to say development of a sound techno-scientific educational system with a futuristic outlook.

The major feature of the sophisticated technology, is that it has not only changed the production processes but it has also introduced basic changes in deployment of manpower. High technology needs sound interdisciplinary group activities, rather than a technical man working individually. Such group activities, normally include theoretical and experimental physicists, physical chemists, electronic engineers, metallurgists, mechanical engineers and professionals from many other diverse disciplines—depending on the areas of activities. Today, thin line between the responsibilities and duties of scientists and technologists or engineers are vanishing very fast. Even at the technicians level, inter-disciplinary knowledge is becoming an essential requirement.

If we analyse the fast changing trends of the technological environment, we would notice certain new phenomena emerging which were hardly perceptible in the immediate past. One thing is becoming clear. In future, most of the manual skills will gradually be taken over by machines and the rate of obsolescence in technology will become faster and faster which will make replacement of machines a regular feature eventually. In such circumstances maintenance of older machines may cost more in term of human labour and expenses than to obtain new machines.

The foregoing analysis cleary establishes that no more development of technical education, which is responsible for supply of trained technical manpower, can be based on linear projection of past experiences. And there is a need for drastic change in the basic approach. This will require thorough review of the existing situation and reorient it to suit the new situation. Since the technological environment is changing towards group activities, the fundamental approach to planning of technical education should be based on education team building qoth at the degree and post-graduate levels with high degree of inter-disciplinary mobility—horizontally as well as vertically. This will require break-down of the barrier between science and technology and also between the various existing disciplines under engineering or technology. This will need drastic revision of curricula and syllabii, in the process of educational team building. Users of the products of the technical education should be involved right from programming for better appreciation of the industrial and other technical needs at the future operational level. Such team building will not only help to create conditions for harmonious development of the technical institutions and its products, but will also help in developing faculty competence in a more rational manner, for better appreciation and understanding of the objectives and philosophy of educational programmes. Such team building will require, not only free flow of information and materials between producers and users of the technical education products but there should be greater mobility between faculty and technical specialists in technical establishments and industry for intellectual inter-action and for promotion of better understanding of the national problems.

With the sophistication in technology, there has been tremendous explosion of knowledge and information, and such knowledge and information, are more than doubling within three to five years. Education therefore, cannot be any more a one time exercise ending with a single educational programme.

For an effective and efficient technical education system, there should be a built-in mechanism in the system for continuing education, for upgrading and improvement of competence and knowledge of the technical personnel already engaged in various activities. The continuing education programmes should be organised in close collaboration with the Industry and technical establishments. In fact, an essential feature of the future development of technical education should be close collaboration between the technical institutions and the users' organisations at every stage of development.

Since technical education is tailor made for industrial needs, it is necessary to have advance information regarding types and number of various categories of trained technical persons required by various establishments. Therefore, continuous assessment of manpower needs for various development activities becomes an important task of the planners of technical education. This is not an easy task, particulary, in a changing technological environment. However, sophistication of technology needs broad based education. A global assessment of technical manpower required can be easily arrived at if type of technology to be adopted or adapted is known.

Since production of technical manpower needs long leadtime (it requires atleast six to seven years to produce a engineer/technologist to be usefully employed, about ten to twelve years to produce a research scientist or engineer and about twelve to fifteen years to produce a competent technical manager) it needs predictable information for projection of manpower requirements in the terms of type, quality and number, well in advance to draw up programmes and plans for development of technical education in proper perspective. The impact of whatever is planned during seventh plan period, will be felt only in the first quarter of the 21st century, when the socio-economic situation will be quite different from today's thinking, it may be un-recognizable in relation to the present situation.

Considering various aspects of the problems related to the development of technical education for future development, it clearly emerges that educational programming will be complex in nature. In view of changing socio-economic situation in future, professional engineers, scientists, etc. will have to share greater and greater social responsibility and ultimately they have to assume leadership of the communities. Therefore, technical education programmes have to be based on much broader perspective than to produce persons with professional competence only. In fact, realising the needs of the changing world, the international conferences like UNESCO, General Conference in 1976, had laid down certain basic guidelines for development of technical education programmes to serve the changing needs of the modern sophisticated techno-scientific society of 21st century when a professional person will have to assume both social and moral leadership of a global society.

To serve the purpose, there is a need for thorough-reorientation of the curricula and syllabii of the technical courses. These courses have to be broad-based, flexible and susceptible to continuous changes with the fast changing requirements of time. Therefore, the programming should have some built in mechanism for innovation and provision for exposure of the students to actual industrial and technical environment prevailing outside the institutions through the process of something like practice schools or attachment with some technical establishments as provided in the educational programmes of the Birla Institute of Technology and Science, Pilani. For this purpose, technical education programme should adopt modular system.

Technical education planners should keep in mind that with greater and greater sophistication of technology, knowledge of miniaturisation, computerisation of information/its application and retrieval, new materials, economisation of energy consumption, alternative renewable sources of energy, application of bio-technics and genetic engineering etc. should be built in the educational programmes of technical courses at degree level. Moreover, electronics and communication will be the discipline, the bed-rock on which, all future technology will depend. Therefore, in future, without a basic knowledge of electronics, no human being will be able to function, not to speak of professionals, like engineers, scientists, doctors etc. In view of this, basic electronics has to be the core component of all technical education at degree level. This will need strengthening of the study of fundamental sciences and mathematics. In addition, substantial doses of social sciences and humanities study needs to be incorporated in technical education programmes. There should also be greater inter-action between various branches of education to humanise the professionals, on one hand and on the other, make people, at large aware of the environment in which, they will live in the 21st century. This will also help to achieve the dual objective of education, that is to provide individually with the basic tools to develop their personality and also to prepare them for entering into the world of work with self confidence and competence, thus assisting an individual to develop the spirit of adventure and entrepreneurship. For development of technical education in proper perspective there is a need for an efficient monitoring and evaluation system at all levels of planning with a view to correct the drift, if any, from the objective and goal or to modify the very objective on the basis of experiences.

During recent years, there has been a widespread tendency to draw a line between rural development and general development process forgetting that rural development is a part of the total development process and it cannot be considered in the isolation. Any attempt to do so, will distort the total picture of development. This is exactly what happened in Indian planning. As a result, after thirty years of planning, we have remained, one of the poorest countries of the world. Unfortunately, it has penetrated in the field of technical education also. As science and technology are universal and they do not differentiate between countries or areas, similarly technical education which is a product of science and technology, should not differentiate between rural and urban and distort the educational system to suit a very short term requirement. What is actually needed is to inculcate in every individual the technique of transfer of learning so that he can reorient himself according to a particular situation which he may have to face during his working life.

It is hoped that every one will agree that the satellite communication or solar energy utilisation programmes etc. will benefit all irrespective of location either in rural or urban areas. For their development and maintenance can there be a separate technology—one for general and other for rural? If not, can the manpower required for development and maintenance of them be different.? Therefore, is it advisable to distinguish rural and general development? When all of us know that the artificial physical barrier between rural and urban areas is going to vanish with the growth of technology and science, why then, separate out rural development from the general ?

Besides all that has been stated, there is a need to settle another important and vital issue. That is, what should be the duration of technical courses, specially at the degree level? One should not forget that evolving an educational programme is not a mathematical or statistical exercise, but, has to satisfy specific objectives. The duration of a technical course is, therefore, related to this objective and nothing else. Education, being an integrated system, the duration of degree course in any technical subject will depend not only on the objective to be attained, but also on the efficiency of the higher secondary education, the products of which are the input of any technical degree course. In the past, the major objective for the degree course was to prepare people for routine production (based on foreign knowhow) and mainly maintenance oriented jobs and when the education system for input to a degree course in engineering/technology was 10 years +2 years of intermediate education. The duration of the engineering courses used to be mainly 4 years (some cases 3 years). When the eleven years school education system was introduced, on the recommendation of the All India Council for Technical Education, most of the States adopted a new system of five-years integrated technical degree course. The word 'integrated' is very significant. In recent years, when the school education system was reoriented to 10 years plus 2 years of higher secondary School education adopted on the recommendations of the Education Commission, the duration of the engineering/technology courses at the degree level was, on mathematical calculation, reduced to four years in place of five. The question is—Is it a wise decision? The evaluation of the present four year courses in relation to the objective to be achieved will answer the question and present a clear picture. One should not forget that there has been a drastic change in the objective to be achieved by the degree course during the last three years, and it is changing faster in terms of functions and job requirements of an engineer or technologist. In addition to this, there has been a tremendous explosion of knowledge and information during the last decades and will continue in future, because of gradual transformation of the production techniques etc. due to introduction of computers and microprocessors, basic knowledge and information required for a graduate in technical subject, will be much more than in the past. Therefore, it is high time, that the existing degree programmes are critically reviewed in all its aspects. This task needs to be completed, before the seventh plan period starts.

Educational planners and administrators who are responsible for planning of technical education for seventh plan, should keep in mind, that tinkering with any technical education programme both at macro and micro level planning could no more serve any purpose for the future development. It needs a complete reorientation of thinking and approach in evolving worthwhile development programmes for technical education to meet the formidable challenges of the future. □

[Paper presented at the XIII Annual Convention of the Indian Society for Technical Education]

Marathwada Organises Symposium on the Role and Significance of Literature in FLT in India

The Department of Foreign Languages of Marathwada University hosted an all India University Grants Commission Symposium on "The Role and Significance of Literature in FLT (Foreign Language Teaching) in India" from 21-24 December 1983. It covered the themes such as the need for including a study of literature, the role and the need of the appreciation of of literary texts from the country concerned for the Indian class room, the stage and level at which the literature should be introduced, the significance of literature in the process of language learning and the evaluation of the materials produced in India. The main aim of the symposium was to evolve a strategy for language teaching in different courses in Indian Universities.

The symposium, which was a part of U.G.C.'s inservice training pragramme for the teachers of different foreign languages, was inaugurated by Dr. R.N. Srivastava, Professor and Head, Department of Linguistics, Delhi University, Delhi. Dr. J.P. Dimri, Professor and Head, Department of Russian, C.I.E.F.L., Hyderabad, presided and Justice M.P. Kanade, Vice-Chancellor welcomed the delegates representing Russian, German, Arabic, Persian, Bhasa-Indonesia, Spanish, Vietnamese, Serbo-Crotian and Polish.

In all about 50 teachers participated in the symposium and 30 papers were presented.

Dr. R.N. Srivastava underlined the need for production of indigeneous materials for teaching foreign languages in India. He emphasised the role of FLT in the present stage of growth in India. Dr. J.P. Dimri analysed the materials produced so far in Russian in India and was of the view that the materials to be produced needs to be linked with the aims and objectives of the FLT in India. Dr. (Ms) Sabra Habib of Lucknow University, in her valedictory address, focussed on the need for text books for functional/specific courses while Dr. R.S. Bagga, of JNU, the coauthor of the *first text book in Russian* based on the use of mother-tongue (Hindi) and English, stressed the fact that the mothor-tongue of the learner should be accorded a significant place in the methodology of teaching a foreign language.

The following Resolutions were adopted in the valedictory function :

"We, the teachers of foreign languages in various Indian Universities and Institutions, who gathered here for an all India Symposium on "The Role and Significance of Literature in FLT in India", have also reviewed the role and significance of Foreign language teaching in India. We are of the opinion that in view of the coming closer of the peoples of the world in different fields like culture, education, science and trade, the teaching/learning of foreign language has assumed a new dimension. Since our country has come to play a leading role in promoting such closeness and understanding, it is only natural that foreign language teaching/learning should find a special place in our education. Besides, the teaching/learning of foreign languages will help us, as, was underlined by our Prime Minister, Mrs. Gandhi, in her address to the NAMEDIA conference recently, in diversifying the sources of our knowledge and information, which are presently heavily dependent on only English Language. We, therefore strongly recommend that:

(1) the significance of foreign language teaching/learning should be clearly defined from both pedagogical and socio-political point of view;

(2) the function of foreign languages vis-a-vis various Indian languages should also be defined clearly and there should be greater interaction between foreign language teaching departments and departments of Indian languages which teach them as foreign languages;

(3) not only should existing departments of foreign languages be strengthened through, among others, upgradation and expansion of faculty positions but also increased facilities should be provided for introducing these at the school level as well;

(4) the U G.C. should have an independent panel for the foreign languages;

(5) the U.G.C. should ensure that the native speaker under cultural exchange programmes should be assigned only to the University wherever there is an Indian teacher working;

(6) the U.G.C. should encourage the materials production in the form of text books, anthalogies etc., by the Indian teachers by giving liberal grants for the purposes;

(7) the U.G.C. should encourage the national symposiums conferences etc., in the foreign language teaching in India;

(8) the U.G.C. should implement the resolutions, decisions and recommendations of different all India conferences, symposia etc., held so far;

(9) the U G.C. should have a central cell located in a University/Institute which should ensure the import and distribution of text-books in different of text books in different languages to different courses of teaching in India (At present, there Is no single agency which can procure books and reading materials in Arabic, German, Russian, Persian, Vietnamese, Italian, Japanese and Serbo-Crotian etc.;

(10) the U.G.C. should direct the universities that they should

revise and update their syllabi every three years and the new material be included in the courses;

(11) in the interest of all round development of foreign languages as a discipline the U.G.C. should ensure that there are independent and separate Departments of Foreign Languages consisting of all the foreign languages taught and wherever each language is developed the universities should be asked to have a separate department for every language.

With a view to achieving these aims, we resolve that an all India Forum for Foreign Language teachers including those teaching English and Indian languages as foreign languages, be founded at the earliest."

Karnatak Varsity's oriental conference memorial lectures

Dr. K. Satchidananda Murty, Professor of Pailosophy and Ex-Vice-Chancellor, Sri Venkateswara University, Tirupati delivered the 28th All-India Oriental Conference Memorial Lectures on 'The Philosophy of the Mahabharata' on 12th January 1984, under the auspices of the Department of Philosophy and the Prasaranga, Karnatak University, Dharwad.

In the course of the lectures, Professor Murty explored the philosophical treatment of Dharma, Moksa and Adhyatma—the three principal themes in the Mahabharata. Defining the concept of Dharma, he pointed out that it was the founding principle of the moral and spiritual life of man according to the Mahabharata, and upon this alone rested the social and cultural ethics of the people. Moksa being the *Summum bonum* of human life in the Mahabharata, there was an elaborate exploration of the means of realization of it along side a systematic metaphysics of the ultimate Reality, the Adhyatma. It is the latter, the metaphysics of the Adhyatma which is the grand finale of the epic which is popularly characterized as a text on the glorification of the Lord, Srikrsna.

Professor Krishnamoorthy who presided over the lectures pointed out the importance of a philosophical understanding of the epic. At the begining of the lecture series Prof. L.C. Mullatti welcomed the Guest and the audience. After the final lecture, he reviewed the lectures and elaborated on the critical perespective in which the philosophical themes of the Mahabharata would be presented so that a proper understanding of the epic themes could be achieved by students of contemporary thought.

Dr. V.N. Deshpande, of the Dept. of Philosophy proposed a vote of thanks.

Cochin University's programme for training candidates for all India services

The State Government of Kerala has approved a scheme of the University of Cochin to set up a state-wide network of training centres to train candidates for recruitment to the various All India Services, Banking Services, and other public and private sector services. The scheme was prepared by the University at the instance of the State Planning Board.

The basic objective of the scheme is to give orientation and training to candidates (i) to answer objective type tests; (ii) to participate in group discussions; (iii) to face personal interviews; and (iv) to strengthen their ability in spoken English. The scope of the programme will be expanded in due course to cover a large range of services and selection procedures. The proposed training will considerably improve and widen the employment and career opportunities of the educated young men and women in the State.

The scheme will be implemented by the University through its School of Management Studies which will administer the programme acting as the State Level Centre for Training Services. All first-grade colleges and such other institutions in the State will be helped to establish Unit Level Training Centres to carry out the objectives of the programme. Suitable fees will be charged from the candidates with a view to make the entire programme self-supporting.

Language laboratory at GRI

A language laboratory has been set up at Gandhigram Rural Institute (Deemed University) by the Faculty of English and Foreign Languages. The laboratory was inaugurated by Dr. Velayudhan, Director, Regional Institute of English, Banglore on 21st January 1984 with the Vice-Chancellor, Dr.M. Aram in the chair.

In his presidential address, Dr. M. Aram, emphasised the need for a language laboratory to help students improve their skills in spoken and Communicative English. He hailed the commissioning of the laboratory as one of the milestones in the growth of the University. Elaborating, he pointed out that the laboratory would be open not only to students and teachers of the University but also to elementary and high school teachers in the nearby environs of Gandhigram.

In his inaugural address, Dr. Velayudhan, remarked that the installation of a language laboratory would go a long way in improving the speech habits of the learners. Deliberating on the various forms of English, he opined that 'intelligibility' should be taken as the criterion for any 'speech communication'. He added that the gadgets in the language laboratory could only supplement the teacher in any language teaching programme but not supplant him.

A teachers' association with a difference

An association of Physics Teachers belonging to the Universities and affiliated colleges in the Vidarbha region of Maharashtra formed sometime ago aims to improve the course contents at various levels and also is determined to improve the interaction with the students community in general and talented students in particular.

To achieve its goal the Association arranged for the second consecutive year, a students seminar of 29th Jan., 1984, at Nagpur, Akola, Amravati and Ballarpur, in which about 300 students from undergraduate classes participated. This type of students seminar provides a common platform for talented, and inquisitive students from various colleges to openly discuss some selected topics in the presence of expert teachers. This seminar is a regular activity of the Association and helps to identify and encourage the talented students from various colleges. The students identified from the seminar are awarded some incentives prizes also.

Another activity which this Association is regularly arranging for the benefit of the students is a "*Talent Hunt* Examination" which is also held every year.

Seminar on English for commerce teachers

While delivering the valedictory address on 22nd January, 1984 at the end of eight-day seminar sponsored by UGC, on English for Commerce Teachers held at Shri J.B. Thacker Commerce College, Shree Manohar Sinhji Jadeja, Minister for Civil Supply and Health, Govt. of Gujarat said "Improvement in teaching of English in Gujarat as well as in India, is the responsibility of society as a whole and not of English teachers only.",

He said English, being an international language, must be taught perfectly. Our worthy Prime Minister had already expressed her concern about the deteriorating standards of English in India. In Gujarat the standard of English was at the bottom in the 60's and 70's but the present Govt has taken steps to improve it. English is a window to the World and so we must have perfect knowledge so that we can compete with the world in science & technology as well as in medicine.

32 English lecturers from Gujarat, Saurashtra, Bhavanagar and one from S.N D.T. University participated in the seminar.

President of the P.E. Society Shri Ramjibhai Thackker said that this seminar would help the students in the best way as the teachers who have come over here will benefit by attending the seminar for eight days. The Director of this seminar Dr. Subhash Jain, said this seminar will show how best one can teach English to commerce students in an easy way.

Workshop to revise B.Ed. syllabuses

More than forty senior teacher educators attended a workshop to revise the B.Ed. syllabuses of the Agra, Meerut, Dayal Bagh and Aligarh Muslim Universities. The workshop conducted by the Department of Teacher Education (DTE) was held at Meerut from November 7-11, 1983.

The workshop recommended changes in the existing B.Ed. syllabuses based on the 'NCTE Curriculum—a Framework'. The changes suggested were in the areas of Pedagogical courses, methods and techniques of evaluation, concept of content-cum-methodology, practise teaching SUPW and working with community. A report based on these is under preparation and will soon be circulated to the concerned colleges of education and university education departments. It will finally be placed before the Boards of Studies in Education for approval and implementation by these universities.

(Courtesy NCERT Newsletter)

Ayurvedic seminar on skin diseases

A three-day Seminar on "Skin Diseases" sponsored by the Institute for Post Graduate Teaching & Research of Gujarat Ayurved University will be held in February/March-1984 at Jamnagar.

This is the first institution of its kind in India established in 1956 with a view to impart postgraduate education to Ayurvedic Scholars. More than 500 Scholars have undergone training & obtained Postgraduate degrees from this institution during the last 25 years.

This all India level Seminar will be attended by leading Vaidyas, Professors & Experts from different parts of the country. Nearly 300 delegates are expected to participate in this Seminar.

The Seminar is being organised in the context of the Government plan for eradication of Leprosy.

Education Minister, Mrs. Sheila Kaul, Visits AMU

The foundation stone of a new guest house of the Aligarh Muslim University was laid by Mrs. Sheila Kaul, Union Minister of State for Education, Culture and Social Welfare, on January 23, 1984.

Addressing the members of staff and students, Mrs. Kaul emphasised the importance of the role played by the Central Universities and said that these Universities should be a model for other institutions of higher education. She was happy to note that the AMU was moving in the right direction.

Speaking on this occasion, the Vice-Chancellor, Mr. Saiyid Hamid, expressed his gratitude to the Minister for the kind attention she was paying to the needs of the University.

Mrs. Kaul's busy schedule at AMU included a visit to the AMU Women's College, Sarojini Naidu Hall, University Polytechnic, Women's Polytechnic, Sir Syed's Tomb, Maulana Azad Library and the Students' Union.

At the University Polytechnic Mrs. Kaul laid the foundation stone of workshop Bays.

Mrs. Kaul was accorded a grand reception at the AMU Students' Union. She was enrolled as a Life Member of the Union amidst thunderous applause.

Research Work at IITs

Answering a question in the Lok Sabha on 15-12-1983, Smt. Shiela Kaul, Minister of State in the Ministry of Education and Social Welfare mentioned that all the academic departments and inter-disciplinary centres of research in all the five Indian Institutes of Technology (located at Bombay, Delhi, Kanpur, Kharagpur and Madras) were engaged in research. The major areas of research in each of these five IITs were as follows:

Indian Institute of Technology, Madras

Structural analysis; Finite element techniques; Tribology; Lasers; Fibre-optic communications; Signal controls; Power Electronics; Microprocessors and related areas; Thermal sciences; Turbomachines; Power metallurgy; Super-alloys; Particle Technology; Chemical process development; Bio-sciences; Alternative sources of energy; Bio-gas; Material science; Optics;

Indian Institute of Technology, Delhi

Finite Element Applications and Computer Aided Design; Experimental Stress Analysis; Agro-Chemical Engineering; Digital Signal Processing; Microprocessors and related areas; Experimental and Theoretical Solid State Physics; Plasma Physics; Laser Spectroscopy and Technology; Microelectronics; Signal Processing; Display Systems for Radar and Sonar; Storm Surege Prediction; Air Pollution Modelling; Bioconversion Technology-Feedstocks and Fuels; Rehabilitation Engineering; Fibre and Polymer Science; Lubrication and Energy Conservation; Solid State Electronic materials and Devices; Polymer Science and Technology.

Indian Institute of Technology, Bombay

Material Science; Cryogenic Engineering; Energy Systems; Laser System; Off-shore Engineering.

Indian Institute of Technology, Kanpur

Aircraft Structures; Mechanics of Aerospace Vehicles: Petroleum Engineering and Natural Products; Computer Aided Design; Solar Energy; Geotechnical Engineering; Biomechanics; Biomathematics; Environmental Pollution; Industrial and Management Engineering; Material Science; Process Metallurgy; Ceramics Engineering; Solid State Physics and Crystallography.

Indian Institute of Technology, Kharagpur

Aircraft Design; Water Management of Field Crops; Biofertilisation and Slow-Release Fertilisers; Urban Pollution Problems and Determination of Land Uses; Development of Catalysts; Bio conversion technology and biogas production; Membrane Plate and Shell Analysis; Water and Waste Water Treatment; Model Studies, in Seivers and on Tidal Power Generation; Microprocessor-based Devices and control systems; Unconventional methods of electrical power generation; Fibre optics communication systems; Computer-aided modelling and design; Remote sensing and natural resources; Thermal stresses in Nuclear-Reactor Fuel Rods; Structural Design and Analysis of Ships; Development of Material for Solar Energy Conversion; Cryogenic Food Freezing; Rice Milling and Paddy Parboiling; Electromagnetic Scattering from complex tare gets; Relamation of Wast-Rubber croyogrinding.

Vocationalisation in USSR

There are about 7,500 vocational schools in the Soviet Union which turn out four million vocationally trained boys and girls every year, according to a report on secondary vocational education in the USSR. This report is the outcome of the visit of an Indian delegation to the Soviet Union, led by Professor C.S. Jha, Indian Education Adviser (Technical). The other members of the delegation were —Mr. P.K. Patnaik, Joint Secretary (Schools) in the Union Ministry of Education & Culture, Mr. S. Venkataramani, Director General of Employment and Training and Joint Secretary in the Union Ministry of Labour, Prof. Arun K. Mishra, Head of NCERT's Vocationalisation of Education Unit and Mr. K.M. Gedam, Director (Training) in the Maharashtra Directorate of Technical Training.

Of the total of 7,500 vocational schools there are about 2000 rural vocational schools with an enrolment of nearly one million students, says the report. These schools are fully equipped with land and machines including motor vehicles and cover a variety of trades both traditional and modern.

These vocational schools keep a close liaison with industries and are run in close cooperation with the base enterprises like railways, automobile factories, agricultural farms etc.

The delegation which visited several schools found that they were all well-equipped. In USSR, it is the vocational education system which imparts general education and not *vice-versa*. In direct contrast to what obtains in India, the USSR system does not produce a large number of students for entering college. Though students can enter the college on the basis of their merit nearly 90% of the students prefer to take up jobs at this stage.

The products of the vocational schools are enrolled on the basis of assured employment at the base enterprises or in their area of specialisation. The enrerprise provide information about manpower needs with various skills at least three years in advance. The training is imparted as per the requirements of the employer and in close connection with the productive sector. The situation however is entirely different in India. One of the objectives of vocationalisation in India is to generate self-employment, says the report.

(*Courtesy* : NCERT Newsletter)

Diploma in Archival Science at Gujarat Vidyapith

The Gujarat Vidyapith has from this year instituted a new diploma course in Archival Science along with an archival cell with the cooperation of the Department of Archives of the Government of Gujarat. The course consists of five major studies:

(1) Archives Administration; (2) Record Management; (3) Conservation; (4) Archival Library System and Information Science; (5) Reading and Interpretation of documents.

Gujarat State has extensive Record Repositories at District and Taluka levels. All these are short of trained personnel. The State Government had deputed some of its employees of the Archives department to undergo training under this course along with other students.

The Vidyapith library has fullfledged Reprography unit and Micro-filming & Micro Reader facilities, in addition to fumigation chamber & Audio-visual equipments. Prof. Ramlal Parikh of the Gujarat Vidyapith and the member of the Indian Historical Record Commission directs this course along with Dr. Resesh Jamindar who is a member of the Regional Record survey committee of the state Archives.

MPS implemented at Sardar Patel University

Sardar Patel University, Vallabh Vidyanagar (Gujarat) has implemented the Merit Promotion Scheme (MPS) and necessary steps are being taken in this regard. A Reader has been promoted as a professor and few other promotions are expected to follow.

Gauhati University creates Gurunanak Chair

The Gauhati University created a Chair in the name of the Great Saint and Philosopher GURUNANAK JI in the line of a similar chair created in the name of the great Assamese Saint Sree Sankara Deva in the Punjabi University, Patiala. The purpose of both the chairs is to make research studies on the philosophy and literatures of the great saints. The Guru Nanak chair of Gauhati University could not be filled up so long for want of suitable person. Recently a scholar from Panjab was selected.

Nature and environment conservation society formed

Keeping in view the importance of Nature and Environment and their conservation, more than 130 scientists of the Punjab Agricultural University, have formed a society named 'Indian Society of Nature and Environment'.

The aims and objectives of the Society are to create awareness among general public regarding the importance of Nature and its conservation; to undertake activities against deterioration of the environment; to emphasize the importance of judicious use of natural resources, to conserve the vanishing and endangered species of plants and animals and to provide a thought-provoking and action-oriented forum for the amateur and professional naturalists and environmentalists

To fulfil these objectives, the society shall also arrange lectures, seminars, discussions, exhibitions concerning nature and environment and publish popular and scientific articles on the conservation of fauna and flora.

GNDU's new hostel inaugurated

Mr. Raghunandan Lal Bhatia, Member of Parliament inaugurated a four-storeyed Block of Girls' Hostel of the Guru Nanak Dev University Amritsar. This block costing Rs. 13.24 lacs will add 48 rooms to the existing 188-room Girls' Hostel.

Speaking on the occasion, Mr. Bhatia said that the Guru Nanak Dev University wou'd pay special attention towards applied science and technology.

Coaching classes for SC/ST at Sukhadia Varsity

Sukhadia University, through the Directorate of Correspondence Courses, has started pre-coaching classes for SC/ST students appearing at various competitive examinations. The State Government has given financial aid for training programme.

Small Family—Nation's Survival

A seminar on "Small Family-Nation's Survival" by Citizen's Council of Ahmedabad in co-operation with Gujarat Vidyapith was held on 8th January, 1984 in the Gujarat Vidyapith. Prof. Ramlal Parikh, Vice-Chancellor presided over the inaugural session of the Seminar. It was inaugurated by the Union Health Minister, Shri Shankaranand. Shri S.P. Mittal (M.P. Rajya Sabha), Chairman of the Indian Parliamentarian's Association for Population & Development, was the Chief Guest.

An exhibition of books & journals as well as visual materials on Population Education & Adult education was organized by the Adult Education Research Centre of the Gujarat Vidyapith and Indian Society for Population Education. Over 100 delegates belonging to Medical, Social work & legal professions attended the conference. The Vice-Chancellor Prof. Ramlal Parikh stressed the need for a social movement to raise the marriage age to a minimum of 25 for boys & girls both to contain population growth.

Calendar of Events

Title	Dates	Organising University/Institute	Participants
Ayurvedic Seminar on Skin Diseases	February, March, 1984	Gujarat Ayurved University, Jamnagar	About 300 Vaidyas, Professors & Experts
Impact of College Libraries on Higher Education in Assam	February 24, 1984	Department of Library Science, Gauhati University	———
UGC Seminar on Assessment of the students at the College level in the N.E. region	March 2-5, 1984	Department of Education, Pragjyotish College, Gauhati	———

Sports News

Encouraging performance of Varsities hockey team

Combined Universities Hockey Team once again has displayed creditable performance at the recently concluded All India Republic Day Hockey Tournament at Katni. The team was in fact Runners-up in the Tournament after the declaration of BSF and EME, both teams from Jullundur as joint winners. The performance of each match played by the combined Universities Team is as below:

Beat DEG, Kirki (Poona)	1-0
Beat ASC, Jullundhur	3-1
Beat Artilary Centre, Nasik	8-7
Lost to BSF	0-1

Combined Universities Team was declared winners in the hard lines for the 3rd place when HSEB, Chandigarh expressed their inability to play.

News from Agril. Varsities

New cotton research laboratories inaugrated at PAU

Dr. Sukhdev Singh, Vice-Chancellor of the Punjab Agricultural University said that Punjab produced 16 per cent of the total cotton produced in the country and that the per hectare yield of cotton in Punjab was the highest in the country. The reason behind this was the development of high yielding and disease resistant varieties and superior technology evolved by the cotton scientists of the University, he added.

Dr. Sukhdev Singh was recently inaugurating the newly constructed cotton research laboratories on the Campus.

Tracing the history of cotton research in India, the Vice-Chancellor said that the primary interest of the British Rulers was to produce more fibre to meet the requirements of the textile mills in Britain. The research on cotton was initiated in the beginning of this century and the systematic research on cotton was srarted at Lyallpur where 4F and LSS varieties were evolved. Till the partition, American cotton was grown on a small area of Abohar-Fazilka belt and the rest of Punjab was considered unsuitable for this crop. But this notion proved wrong with the development of short duration and pest resistant varieties like 320F, H14 followed by many others. The Vice-Chancellor showed concern over the damage to cotton crop during the past season and hoped that such situation would not be allowed to repeat in future by adopting adequate plant protection measures.

Dr. T.H. Singh, Senior Cotton Breeder and Head of the Department of Plant Breeding of the PAU in his welcome address highlighted the importance and need of research on cotton. He said that these laboratories had been built at a cost of Rs. 7.21 lakhs provided under the World Bank Financed Integrated Cotton Development Project. He pointed out that the new complex included Agronomy, Breeding, Entomology and Pathology Laboratories besides a crop museum and offices.

HAU workshop on Home Economics

"It is imperative to give new dimension to Home Science syllabus because the content of home science syllabus designed

Correspondence Course in Evaluation Methodology & Examinations

(Basic, Intermediate and Advanced Level)

Applications are invited from College/University teachers for admission to Correspondence Course in Evaluation Methodology and Examinations conducted and co-ordinated by the Research Cell, Association of Indian Universities. There are three separate courses, one each at Basic Level, Intermediate Level and Advanced Level (Special Professional Course). The duration of each of the three courses is six months (April 1st, 1984 to September 30th, 1984). However, the Basic Level Course is offered from Regional Centres like Delhi, Bombay, and Madras. A personal 'Contact Programme' for three days is planned for each of the three courses. A set of prescribed books will be supplied to every candidate free of cost.

Requests for prospectus and application forms accompanied by a crossed Indian Postal Order for Rs. 5/- drawn in favour of the Secretary, Association of Indian Universities and a self addressed stamped envelope (Re. 1/-) should reach the undersigned. The last date for the receipt of application in the prescribed form is **15th March 1984** for non-sponsored candidates and 30th March, 1984 for sponsored candidates. For sponsored candidates, University/Institution can pay the course fee and travel expenses for contact programmes out of unassigned grants provided by University Grants Commission.

Project Director (Examinations)
Research Cell,
Association of Indian Universities,
6, DDA Building, Nehru Place,
New Delhi-110019.

and developed so far have largely remained unpopular in Indian setting" said Dr. R.P.S. Tyagi, Director of Research, Haryana Agricultural University (HAU) Hissar while recently inaugurating a three-day workshop on Home Economics for schools in the College of Home Science of the university.

Stressing the need for developing Home Economics within the framework of National Council of Educational Research and Training (NCERT) syllabus, Dr. Tyagi said that for the new home science syllabus 'Home' should be our basic unit for national development. For this purpose he urged the scientists and delegates to get in touch with the problems of rural, specially the uneducated, farming community.

This three-day workshop was organised and sponsored by NCERT. 20 delegates from various home science institutions of the country took part in the workshop. In this workshop the scientists explored the possibility of bringing about a qualitative improvement and quantitative expansion of Home Science education.

Farm business training for rural people

The Department of Business Management of the Punjab Agricultural University has started a new three-month training course in agricultural business management for the educated young men of the rural areas of Punjab.

P U is the first educational institution to offer such a training programme.

The subjects included in the curriculum are : principles of management, agricultural business management, accounting and finance, marketing and salesmanship, farm management and human relations besides soil management, plant protection, horticulture and farm machinery. There are 25 seats of which 5 seats are reserved for the pre-released defence personnel.

After passing this course the trainees can take up jobs in the Agricultural inputs marketing companies and State Government departments and undertakings involved in rural development. This training will also benefit those persons who intend starting their own business relating to the distribution and sale of agricultural inputs in the rural areas.

ICAR sub-project sanctioned to JNKVV

The Indian Council of Agricultural Research has recently sanctiond to the Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur, a new NARP sub-project for strengthening research on the Sehore and the Sagar campuses. Under this, research on soybean, gram, lentil, arhar and rainfed farming would be strengthened.

HAU symposium

Under the auspices of Indian Phytopathological Society, a symposium on Chemical Control of Plant Diseases will be held at Haryana Agricultural University from 16th to 18th February, 1984. This was disclosed by Dr. J.N. Chand, Chairman of the Organising Committee and Director of Publications, HAU. The main theme of the symposium will be the Bordeaux Mixture—a fungicide which completes hundred years of its discovery and which still holds a promise for chemical control of plant diseases.

Over 300 delegates from different parts of the country are expected to participate in the symposium. Dr. K.D. Paharia, Plant Protection Adviser, Govt. of India will inaugurate the symposium.

Soviet delegation at HAU

A Soviet delegation which was on a visit to India under Indo-Soviet protocol lauded agricultural research by the scientists of Haryana Agricultural University, Hissar. The delegation, on a two-day visit to HAU, had discussions with Dr. R.P.S. Tyagi, Director of Research and other senior members of the faculty. The Soviet scientists were particularly impressed by the work of the plant breeders who have evolved varieties that are suitable to the local conditions.

The delegates visited amongst other places the museum of plant breeding, HAU research farm, botanical gardens and some laboratories.

We Congratulate....

1. Dr. V.K.R.V. Rao, an internationally renowned Indian economist, former Union Minister and Ex-Vice-Chancellor of Delhi University who has been made a national professor which is the highest academic honour awarded to those who reach the pinnacle in their chosen fields.
2. Shri L. D. Kataria who has taken over as Vice-Chancellor of the Haryana Agricultural University, Hissar. Shri Kataria was formerly Commissioner and Secretary of Agriculture in the Haryana Government.
3. Dr. Haribhai G. Desai who has been appointed to carry on the current duties of the office of the Vice-Chancellor of Saurashtra University. Dr. Desai is Professor and Head of the Department of Education in the University and also the Dean of the Faculty of Education.
4. Dr. R.D. Misra who took over as Vice-Chancellor of Allahabad University on January 18, 1984.
5. Dr. J.S. Grewal, Vice-Chancellor, Guru Nanak Dev University, Amritsar who has been elected as the General President of the Indian History Congress.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Dange, Snehal Madhukar. *A study of some properties of generalized Stieltjes transform.* Shivaji U, Kolhapur. Dr. R.K. Saxena.

2. Katre, Shashikant Anant. *Complete solution of the cyclotomic problem for a prime modulus and related topics.* Pb U, Chandigarh. Prof. A.R. Rajwade.

Statistics

1. Agnihotri, Yogendra. *Simulation of runoff hydrographs through stochastic models and black box techniques.* Pb U, Chandigarh. Prof. O.P. Bagai and Dr. V.V. Dhruvnarayana.

Physics

1. Aggarwal, Navin. *Hyperfine interactions through perturbed angular correlation techniques.* Pb U, Chandigarh. Prof. H.S. Hans.

2. Bhosale, Popatrao Nivrutti. *Studies on growth of solution-gas interface films and their use in PEC cells.* Shivaji U, Kolhapur. Dr. S.H. Pawar.

3. Kulkarni, Vasant Ramchandra. *Structural, electrical and magnetic study of some mixed ferrites.* Shivaji U, Kolhapur. Dr. A.S. Vaingankar.

4. Paikaray, Rita. *Hydrodynamics of laser driven fusion plasma and non-linear interaction.* U Delhi. Dr. M.P. Srivastava.

5. Sudhir Kumar. *Energetics of interstitial and substitutional impurities in metals.* Pb U, Chandigarh. Dr. S. Prakash.

6. Tamhankar, Shobha Pandurang. *Studies on spray pyrolytic deposited chalcogenide films and their use in ECPV cells.* Shivaji U, Kolhapur. Dr. S.H. Pawar.

7. Vyankatesh Naidu, T. Ramesh. *Crystallographic, magnetic and electrical studies of copper containing mixed ferrites.* Shivaji U, Kolhapur. Dr. S.A. Patil.

Chemistry

1. Asari, N. Murukan. *Studies in the complexes of some oxocations.* U Ker, Trivandrum. Dr. C.P. Prabhakaran.

2. Gupta, Hari Om. *Chronopotentiometry at the tubular graphite electrode.* Pb U, Chandigarh. Dr. J.D. Sharma and Dr. Ram Prakash.

3. Hukeri, Shashikant Vishnu. *Studies on complexes.* Shivaji U, Kolhapur. Dr. N.G. Zunjurwad.

4. Natekar, Saroj. *Chemical studies on some oriental medicinal plants.* Devi Ahilya, Indore. Dr. P.T. Malsha.

5. Oommen, Susan K. *Inorganic chemistry : Coordination complexes.* U Ker, Trivandrum. Dr. C.P. Prabhakaran.

6. Panse, Milind Mahadeo. *The solution characteristics and properties of some surface coating polymers.* Devi Ahilya, Indore. Dr. K.C. Kudva.

7. Patil, Bhaskar Ganpatrao. *Molecular analysis of the genomes of cellulolytic fungi.* Shivaji U, Kolhapur. Dr. P.K. Ranjekar.

Engineering & Technology

1. Gadgil, Jayant Mahadeo. *An investigation into the air pollution problem due to lagoons.* Shivaji U, Kolhapur. Dr. B. Subba Rao.

2. Mhasakar, Asnok Keshav. *Development of mathematical model to evaluate pollution load in a stretch of Krishna River Basin.* Shivaji U, Kolhapur. Dr. B. Subba Rao.

3. Goel, Rakesh Kumar. *Investigation of power ionosphere by using L.F. and V.L.F. propagation.* Kanpur U. Dr. V.K. Jain.

4. Mishra, Krishna Autar. *Some aspects of optimisations of thyristor controlled D.C. drives.* Kanpur U. Dr. V.K. Jain.

5. Naik, K.B. *Thyristor control of D.C. motors.* Kanpur U. Dr. V.K. Jain.

6. Tripathi, Kamala Kant. *Model and sub-optional control of a class of distributed parameter systems using methods of weighted residuals.* Kanpur U. Dr. V.K. Jain.

BIOLOGICAL SCIENCES

Anthropology

1. Chopra, P.K. *Physical anthropology.* U Delhi. Dr. P.K. Seth and Dr. S. Seth.

2. Dey, Swarupa. *Physical anthropology.* U Delhi. Dr. S. Seth and Dr. P.K. Seth.

3. Gaharbar, Nitiraj Singh. *The study of crosses of normal/abnormal factors and their parental chromosomes.* HS Gour, Sagar. Dr. R.S. Bali.

4. Gottimukkala, Hema Latha. *Dermatoglyphic study of mentally retarded children.* U Delhi. Dr. S.C. Tiwari.

5. Kapoor, Vicky. *Human cytogenetics.* U Delhi. Prof. I.P. Singh and Dr. P.K. Ghosh.

6. Panwar, Chandra Lekha. *Cytogenetic profiles in oberrant human reproductive performance.* HS Gour, Sagar. Dr. R.S. Bali.

7. Rasik Bihari. *Lectins as a tool to detect interspecific differences in mammalian blood and their relevance in highlighting immunogenetic relationship between man and other animals.* Pb U, Chandigarh. Dr. V. Bhalla.

8. Verma, Rajeshwari. *Growth and physiology.* U Delhi. Dr. M.K. Bhasin.

9. Verma, Sunil Kumar. *Anthropogenetic study of the Gonds of Bastar District, M.P.* HS Gour, Sagar. Dr. R.S. Bali.

Botany

1. Singh, Akhilesh Kumar. *Vatavaran pradushan aur padap jagat.* BHU Varanasi. Prof. D.N. Rao.

2. Vaidya, Muralidhar Bhimrao. *Study of mycoparasitic and entomogenous fungi of Maharashtra.* Shivaji U, Kolhapur. Dr. M.S. Patil.

Zoology

1. Mann, Birendra. *Irradiation induced sterility in* **Callosobruchus analis** *Fab and the use of sterile individuals for the suppression of pest population.* Pb U, Chandigarh. Dr. H.R. Pajni.

2. Patil, Rajaram Nivrutti. *Studies on mucosubstances in the gall bladder of some vertebrates.* Shivaji U, Kolhapur. Dr. M.N. Nalawade.

3. Pushpa Devi. *On the karyotypic variability of some Indian Curulionidae (Coleoptera).* Pb U, Chandigarh. Prof. G.P. Sharma.

Medical Sciences

1. Belbaj, Mohammad S. *Indo-Libiyan studies on epidemiology of leprosy.* BHU Varanasi. Dr. Paramjit Kaur.

Agriculture

1. Farindra Singh. *Identification of dwarfism genes and evaluation of their effects on yield and yield traits in spring wheat.* BHU Varanasi. Dr. G.S. Sharma, and Dr. B.D. Singh.

2. Reddy, L. Ranjit Kumar. *Genetic analysis of yield and yield traits in certain lines extracted from the cross,* **Cicer arietinum X C. reticulatum**. BHU Varanasi. Dr. B.D. Singh.

3. Singh, Rana Devendra Pratap. *Mutagenesis in chick pea,* **Cicer arietinum** L. BHU Varanasi. Prof. Singh. M. R.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Agal, Satya Narayan. *Investigations in generalised hypergeometric functions and Laplace transforms.* U Raj, Jaipur.

2. Bohra, R.C. *Studies on generalised special functions and their application to boundary value problems.* MSV, Udaipur.

3. Chennadevi Prabhulingappa, Halakatti Suidhani. *Topics in cosmology and relativity: A contribution to pre-big-bang theory and arrow of time.* Kar U, Dharwad.

4. Iqbal Husain. *Optimality criteria and duality in non-differentiable continuous programming and control.* IIT Delhi.

5. Jacob, Mercy K. *Analysis of discrete function theory.* U Cochin.

6. Mehta, P.K. *Some problems of boundary layer control and laminar boundary layer.* MSV, Udaipur.

7. Nayak, Sailendra Kumar. *A study of oscillatory and non-oscillatory behaviour of solutions of a class of second order ordinary differential equations.* Berhampur U.

8. Parameshwara Bhatta, S. *Generalizations on distributive, standard and neutral elements and ideals in lattices.* Mangalore U.

9. Pramod Kumar. *Boundary layer flows and heat transfer via quasi-linearization.* IIT, Delhi.

10. Prasad, Ganga Sharan. *Investigation into some current problems in geodesic dynamics.* Bihar U, Muzaffarpur.

11. Raman, Vinjamuri. *On congruences, filters and ideals in semilattices.* Andhra U, Waltair.

12. Sharma, R.D. *Application of probability to theory of queueing systems and allied fields.* Agra U.

13. Singh, Kameshwar Prasad. *Some contributions to the fixed point theory in various spaces.* Mag U, Bodh Gaya.

14. Singh, V.B. *Certain integral equations of mixed boundary value problems arising in mathematical physics.* Kanpur U.

15. Sushil Kumar. *Theories of gravitation in relativity.* Bihar U, Muzaffarpur.

16. Tiwari, Mahesh Chandra. *Some boundary value problems associated with dispersion in laminar slip flows.* IIT, Delhi.

Statistics

1. Agarwal, Ranjana. *Contribution to the theory of sampling with varying probability.* U Delhi.

2. Aylawadi, Des Raj. *Studies on some optimization problems.* U, Delhi.

3. Mehrotra, Prem Chanu. *Contributions to sampling techniques.* U Delhi.

Physics

1. Apparao, Grandhi. *Studies on summer monsoon over India during two consecutive years of drought and good monsoons.* U Poona.

2. Biswas, Bhaswati. *Frequency and wave-vector dependent dielectric function and related physical properties of one-component classical rare and metallic degenerate plasma.* U Delhi.

3. Chougule, Vijaykumar Bhau. *Studies on photoelectrochemical cells formed with tin oxide electrodes.* Shivaji U, Kolhapur.

4. Dixit, A.N. *Classical scattering of light and intermediate mass nuclei.* Kanpur U.

5. Giridhar, Sunetra. *Study in stellar spectroscopy.* RSU, Raipur.

6. Gupta, Neela Das. *Study of charge storage and transport mechanism in polar polymers with special reference to electret effect in polyethylene terephthalate (P.E.T.).* RDV, Jabalpur.

7. Kaura, Tara. *Studies on the electronic and pyroelectric properties in polymers with special reference to poly vinylidene fluoride.* IIT, Delhi.

8. Khanna, Kailash Nath. *A study of some properties of simple metals using the model potential method.* Kanpur U.

9. Krishna Raju, Dantuluri Rama. *Studies on the total ttenuation coefficients in certain compounds employing a Mossabauer spectrometer.* Andhra U, Waltair.

10. Lakshmi Narayana, Kalleypally. *Ultrasonic studies in liquid state.* Utkal U, Bhubaneswar.

11. Mishra, Kailash Nath. *Recurrent modulation of galactic cosmic rays in relation to solar and interplanetary disturbances.* APSU, Rewa.

12. Ramakrishna, V. *Nuclear quadrupole investigations on chlorine and bromine nuclei.* Nagarjuna U.

13. Sahastrabudhe, Vikas Shriram. *X-ray spectroscopic study of some transition metal alloys and ferrites.* Shivaji U, Kolhapur.

14. Salgia, C.P. *Study of some aspects of electrohydrodynamic heat transfer from compact devices.* Vikram U, Ujjain.

15. Sengupta, Malobika. *Molecular vibrations and molecular dimensions in some large molecular systems.* Kanpur U.

16. Sharma, Banwari Lal. *Optoelectronic and dielectric processes in kapton polypyromellitimide film.* IIT, Delhi.

17. Shiv Singh. *Study of passive concepts for solar heating and cooling of buildings.* IIT, Delhi.

18. Singh, Jaipal. *A theoretical investigation into the second, third and fourth elastic constants of ionic crystals.* Agra U.

19. Singh, Kamendra. *Studies on the thermoelastic behaviour of ionic crystals.* Agra U.

20. Sisaudia, Madhav Singh. *Luminescence studies of zinc oxide phosphors.* Vikram U, Ujjain.

21. Tambay, R.G. *Phenomenological approach towards the lattice dynamics of cubic metals.* Kanpur U.

22. Vasanta, Bharatula. *Investigations of the optoelectronic properties of some organic and inorganic photoreceptors with special reference to PVP-I2 charge transfer complex and CdSSe (Cu).* IIT, Delhi.

23. Yagnik, H.K. *Studies on ionospheric absorption of short radition waves at vertical and oblique path.* MSV, Udaipur.

Chemistry

1. Agarwal, Anil Kumar. *Studies on receptor interaction of non-steroidal estrogens: Relationship to their post-coital contraceptive activity.* Kanpur U.

2. Agarwal, Arun Kumar. *Analytical, physico-chemical and complexometric studies of sulphonaphthalein indicators.* U Delhi.

3. Agarwal, Sushil. *Chelation of some pesticides with metal ions of biological interest.* Kanpur U.

4. Ajai Kumar. *Studies on lipid-lipid and lipid-protein interactions in model membrane systems.* Kanpur U.

5. Balapure, A.K. *Studies on chemical basis of insulin formation in pancreas.* Kanpur U.

6. Bali, Pawan Kumar. *Chemistry of some hydrogen and halogen containing phosphorylesters.* Pb U, Chandigarh.

7. Batra, Kiran. *Synthesis and evaluation of polyesters and copolyesters based on bisphenols.* Kanpur U.

8. Baveja, Anil Kumar. *Analytical studies on the chemical pollutants of steel industry.* RSU, Raipur.

9. Bhandari, Rani Bala. *Studies in flavonoids.* MSV, Udaipur.

10. Bhatia, Mamta. *Studies on immobilized enzymes.* Kanpur U.

11. Bhatnagar, Mani. *Modification of spontaneous and evoked release of catecholamines from the myocardium by some anti-hypertensive agents.* Kanpur U.

12. Bhattacharyya, Monimohan. *Investigations on the nature of ion-solvent interaction on the basis of viscosity measurements.* U Calcutta.

13. Chakraborti, Nirmalkumar. *Studies on vinyl polymerization : Polymerization initiated by metal redox systems.* U Calcutta.

14. Chaudhary, Anil Kumar. *Studies on chelation of chlorophenoxy acetic acid herbicides with some plant metal ions and their mode of action.* Kanpur U.

15. Choudhury, Nalinikanta Saran. *Studies on kinetics and mechanism of reactions.* Utkal U, Bhubaneswar.

16. Chouhan, R.S. *Identification and selective determination of some rare earths with hydroxytriazenes.* MSV, Udaipur.

17. Datta, Arunkumar. *Studies on oscillatory reactions.* U, Calcutta.

18. Desai, Dhanaji Gundu. *Application of Meldrum's acid in organic synthesis and synthetic studies in natural products.* Shivaji U, Kolhapur.

19. Dubey, Prakash. *Studies on interaction of anaesthetic molecules with biological membrane.* Kanpur U.

20. Gopinathan Nair, K. *Studies in the chemistry of titanium and related elements.* U Ker, Trivandrum.

21. Gujral, Harjinder Kaur. *Metal complexes of pyridinecarboxaldehyde thiosemicarbazones.* Pb U, Chandigarh.

22. Gupta, Samarendra Das. *Studies on the complexometric determination of certain constituents present in ceramic systems.* ISM, Dhanbad.

23. Harish Chandra. *Studies on toxic effects of cyanide on industrial workers.* Kanpur U.

24. Harish Ranjan. *Synthetic studies in terpenoids.* IIT, Delhi.

25. Jain, Girish Kumar. *Systematic chemical and biological investigations of indigenous medicinal plants and synthesis of newer biodynamic agents related to drugs from plant sources.* Kanpur U.

26. Jain, Nisha. *Polarographic behaviour of sulfanaphthalein dyes under various experimental conditions.* Agra U.

27. Jain, Sunil Kumar. *Intramolecular ortho group participation.* IIT, Delhi.

28. Kaul, Shanti Mohan. *Chemical studies on bio-transformation of pyridine derivatives.* Kanpur U.

29. Keswani, Pushpa. *Kinetics and mechanism of oxidation with peroxomonophosphoric acid.* U Raj, Jaipur.

30. Khandelwal, R.C. *Studies on adsorbate ion metal surface interactions employing tracer technique.* MSV, Udaipur.

31. Kothari, D.L. *Kinetics and mechanism of acid permanganate oxidation of malonic acid, substituted melonic acids and their esters and the role of Mn(II) in these oxidations.* MSV, Udaipur.

32. Krishnan, R. *Metal complexes of some imidazole derivatives.* U Ker, Trivandrum.

33. Kushwaha, S.S.S. *Studies on structure-activity correlation of phenoxyacetic acid herbicides and their complexation with some metal ions of biological interest.* Kanpur U.

34. Laha, Swapna. *Studies on the chemistry of some secondary plant metabolites.* U Calcutta.

35. Langade, Appasaheb Dada. *Mesityl oxide as an extractant for metal selicylates.* Shivaji U, Kolhapur.

36. Lilani, M.D. *Kinetics and mechanism of electron transfer reaction between thiourea, some thioureas and related compounds and ferricyanide on.* MSV, Udaipur.

37. Mandloi, Dilip S. *Chemical investigation of some indigenous plants* Vikram U, Ujjain.

38. Misra, Sandhya Arati. *Kinetics and mechanism of some oxidation reactions.* Berhampur U.

39. Modak, Sadhan Kumar. *Studies on photopolymerization of methylmethacrylate using ketone-amine systems as initiator.* U Calcutta.

40. Mohanty, Sudhansubala. *Ion-solvent interactions.* Utkal U Bhubaneswar.

41. Mohapatra, Prashant Kumar. *Synthesis of pharmacologically active heterocycles.* Utkal U, Bhubaneswar.

42. Mukherjee, Irani. *Synthetic studies in 4-hydroxycoumarins.* U Delhi.

43. Myrboh, Bekington. (1) *Synthetic studies on polarized ketoketen-S, S-Acetels* and (2) *Synthetic studies on lead (IV) acetate oxidation.* NEHU.

44. Padma Nabha, J. *Kinetics and mechanism of some organic reactions.* Berhampur U.

45. Panda, Antaryami. *Reactions of octahedral haloamine cobalt (III) complexes in solution.* Sambalpur U.

46. Pandey, Gopal Krishna. *Monitoring and abatement of organic chemicals in the industrial working environment.* Kanpur U.

47. Pandey, Madhu. *Some biochemical changes in experimental cardiac arrhythmias and their modification by antiarrhythmic agents.* Kanpur U.

48. Parekh, B.R. *Potential antimicrobials.* Bhavnagar U.

49. Pathak, Priti. *Studies on mechanism of action of some organic and volatile fungicides.* Kanpur U.

50. Rami Reddy, A. Venkata. *Vinyl polymerization in solution: Vinyl polymerization initiated by manganese (III) acetate—a kinetic study.* SKU, Anantapur.

51. Rashida Banu. *Kinetics and mechanism of the oxidation of some organic compounds by transition metal ions.* MSU, Udaipur.

52. Rekhi, Jasbir Singh. *A study on the complexing properties of allyl isothiocyanate with common and less common ions.* Kanpur U.

53. Renu Bala. *Studies on synthesis of some heterosteroids and related compounds.* Pb U, Chandigarh.

54. Sahgal, R.K. *Study of chemical quality and industrial pollution on surface and ground water in Ganga Basin, Kanpur Metropolis.* Kanpur U.

55. Satyanarayana Murty, Konda Veera Surya. *Some new analytical applications of hydrogen peroxide.* Andhra U, Waltair.

56. Saxena, Alok. *Chemical studies on membrane changes in hepatic disorders.* Kanpur U.

57. Saxena, P.C. *Studies in synthetic drugs: Part I. Psychotropic agents. Part II. Anti-cancer agents.* Kanpur U.

58. Saxena, P.K. *Synthesis and characterization of elastomeric polyurethanes.* Kanpur U.

59. Saxena, Rajini. *Molecular mechanism of anti-fertility action of some non-steroidal compounds.* Kanpur U.

60. Sen, Gaur. *Solvent inter-esterification reaction of fats.* U Calcutta.

61. Sethi, Chaman Lal. *Analytical applications of morpholine-4-carbodithioate.* IIT, Delhi.

62. Setty, R. Venugopal. *Studies in organic polarography: Electro-reduction and kinetics of acid hydrolysis and formation of some azomethanes of furfural.* SKU, Anantapur.

63. Shivpuri, Sushma. *Studies on chelating agents.* MSU, Udaipur,

64. Sindhi, P.C. *Ion exchange studies on nicotine and related compounds.* MSU, Udaipur.

65. Sonakia, A.K. *Chromatographic studies for separation of compounds: Use of zeolite and other adsorbents.* Vikram U, Ujjain.

66. Srivastava, Madhulika. *Chemical studies on regulation of catecholamine biosynthesis in cardiovascular diseases and ageing.* Kanpur U.

67. Subramanian, Lakshmi M. *Studies in cyndethylation.* U Jammu.

68. Sukla, Sharda Prasad. *The study of complexometric behaviour of some Schiff's bases with 'd' block elements.* Kanpur U.

69. Tandon, Anuradha. *Studies on the chemistry of steroid metabolism by pre-implantation embryo and genital tract of rabbits in vitro.* Kanpur U.

70. Tandon, Renu. *Chemical investigation of Indian medicinal plants having anti-fertility, anti-cancer and anti-inflammatory activity.* Kanpur U.

71. Verma, Rajiv Mohan. *Studies on some potential analytical reagents.* RSU, Raipur.

72. Wasey, Abdul. *Trace analysis of metals after extraction and coprecipitation of their metal chelates with naphthalene.* IIT, Delhi.

Earth Sciences

1. Bhat, Mohmad Shafi. *Study of granites between Saspola and Sngemo, Ladakh District, J & K State.* U Jammu.

2. Jayasheela, H.M. *Genesis and beneficiation studies of iron ores of Hospet-Bellary sector, Karnataka State, India.* Gulbarga U.

3. Mukherjee, Manoj Kumar. *Neotectonism of the South Cambay Basin, Gujarat.* Utkal U, Bhubaneswar.

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5. Saigal, Girish Chander. *Geochemistry, petrology and mineralogy of precambrian phosphorites around the base metal bearing carbonates of Udaipur, Rajasthan State, India.* U Delhi.

6. Vasudevu, Kaniti. *Studies on the beach configuration, grain size distribution and heavy mineral concentration along the Visakhapatnam coast.* Andhra U, Waltair.

7. Venkateswara Rao, Velaga. *Occurrence, distribution and development of ground water in Gostani River Basin.* Andhra U, Waltair.

Engineering & Technology

1. Agrawala, Shaligram. *Some studies on decentralised control of interconnected power systems.* IIT, Delhi.

2. Anand Rao, D. *Formulation of graph theoretical structure-sensitive Zbus models for power system analysis.* IIT, Delhi.

3. Anil Kumar. *Theoretical studies on flow problems in physiological fluid dynamics.* IIT, Delhi.

4. Bhalla, Subhash. *Synchronization and crash recovery in distributed systems.* IIT, Delhi.

5. Bhim Singh. *Analysis and design optimization of irrigation pump motors.* IIT, Delhi.

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9. Jain, Vishal Chand. *Flexural behaviour of reinforced concrete beams made with coir or steel fibre concrete.* IIT, Delhi.

10. Kameshwar Prasad. *Solar crop drier.* Bihar U, Muzaffarpur.

11. Kurian Joseph. *Programming techniques for removing data dependencies in generalized Eigen problems with applications.* IIT, Delhi.

12. Mahajan, Ranganath Bhalchandra. *Studies on solar air heaters for crop drying.* IIT, Delhi.

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Admission Notice 1

Session : 1984-85

Applications are invited for the following courses for which duration, values of monthly stipend and eligibility conditions are briefly described below. Further details and other conditions are available in the prospectus. Admission to all courses is based on academic record, written tests and interview.

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Duration: 3 years; *Stipend* Rs. 100; *Eligibility*: Successful completion of 10+2 years of secondary education (or equivalent thereof) with Mathematics and English.

1.2 MASTER OF STATISTICS

Duration: 2 years; *Stipend*: Rs. 125; *Eligibility*: 3 years Bachelor's degree with Statistics and Mathematics as full subjects or equivalent qualification, obtained after twelve years of secondary education Those without Statistics, but having outstanding mathematical ability, may also be considered. Holders of Statistician's Diploma/Senior Diploma of ISI are eligible for admission to the second year of the course.

1.3 MASTER OF TECHNOLOGY IN COMPUTER SCIENCE

Duration: 2 years; *Stipend*: Rs. 600; *Eligibility*: Master's degree in a relevant subject or Bachelor's degree in Engineering/Technology or equivalent qualification and knowledge of relevant topics of Physics and Mathematics.

1.4 RESEARCH COURSES LEADING TO REGISTRATION FOR THE PH.D. DEGREE

Stipend: Rs. 600; *Eligibility*: a good Master's degree in Mathematics, Statisties, or Mathematical Economics; or exceptionally outstanding mathematical maturity with B.A./B.Sc. degree with Mathematics, Statistics, or Economics as a main subject.

2. POST-GRADUATE DIPLOMA COURSE IN STATISTICAL QUALITY CONTROL AND OPERATIONS RESEARCH

Duration: 15 months; *Stipend*: Rs. 600; *Eligibility*: Bachelor's degree in Engineering/Technology or Master's degree with Statistics/Mathematics up to graduate level or recognised research/other work in Statistics.

All courses are offered in Calcutta. In addition, courses 1.2 and 1.3 are offered in Delhi and course 1.4 in Bangalore.

Besides stipend there is also a suitable annual book allowance. Hostel facilities are available. *Candidates who have appeared or are due to appear for the qualifying examinations before 1 July 1984 can also apply.* Selection tests for the courses will be conducted at a number of centres. Candidates should satisfy themselves that they are eligible for admission to the course for which they apply. If at any stage it is found that a candidate does not satisfy the eligibility conditions or the information furnished by him in the application is incorrect, his application will be cancelled. Prospectus and application form can be obtained from the **Dean of Studies, Indian Statistical Institute, 203 Barrackpore Trunk Road, Calcutta 700 035**. For this an amount of Rs. 8/- is to be paid by cash (between 10.30. a.m. and 2.00 p.m.) or by crossed postal order or by bank draft payable at Calcutta in favour of 'Indian Statistical Institute.' Postal orders must contain the name and address (in block letters) of the sender. Money orders and cheques will not be accepted.

Last date for receiving requests for application form	:	**16 March 1984**
Last date for receiving applications	:	**31 March 1984**
Date of selection tests	:	**20 May 1984**

Indian Council of Agricultural Research

Krishi Bhawan, New Delhi-110001

ICAR AWARDS FOR TEAM RESEARCH FOR THE BIENNIUM 1983-84

Nominations are invited for ICAR Award for Team Research for the biennium 1983-84. The award is given once in two years to interdisciplinary teams of research workers for outstanding research work in the field of agriculture including agricultural economies and statistics, animal husbandry and fisheries in the form of a scroll of honour and a medal to each member of the award winning team.

All scientists engaged in research in the field of agriculture, animal husbandry and fisheries sciences in India shall be eligible for the award. The award of each prize shall be made for notable and original interdisciplinary research both fundamental and applied as reflected in books, monographs, papers or other forms of published account of outstanding research work, inventions or discoveries. In the case of contributions like new crop varieties or new breeds of animals at least 3 years' data on the performance of the strains will have to be provided. The results of research achieved/contributions made by the teams should be during the five years preceding the year of award.

Nominations can be made amongst others by Vice-Chancellors of agricultural universitiesor other universities having faculty of agricultural or biological sciences, Directors of research institutes including Principals of agricultural and veterinary colleges, Presidents of scientific establishments in the country such as CSIR, BARC etc.

Nominations for the award should be supported by a statement of the inter-disciplinary team work, achieved, accomplished or performed by the team which is being nominated and a reasoned justification for the nomination together with the reprints of publications or other supporting data. In all matters relating to the award the decision of the Council shall be final and no correspondence on this account will be entertained.

The last date for receiving nominations for the award is **30th April, 1984.** The last date for candidates in the Andaman and Nicobar Islands, Lakshadweep States/Union Territory in the North Eastern Region, Ladakh Division of J&K State & Sikkim is **16th May, 1984.** Six copies of the proposals on the prescribed proforma for the award should be sent in a sealed cover marked 'Confidential' to Shri K.S. Krishnaswami, Additional Secretary (A), Indian Council of Agricultural Research, Krishi Bhawan, New Delhi-110001. The copy of the proforma can be obtained from him by sending a self addressed envelope in the size of 27 cm x 12 cm. Applications/nominations received without six sets of reprints of publications are liable to be rejected at the scrutiny stage.

RAFI AHMED KIDWAI MEMORIAL PRIZES FOR AGRICULTURAL RESEARCH FOR THE BIENNIUM 1982-83

Nominations are invited for the Rafi Ahmed Kidwai Memorial Prizes for Agricultural Research for the biennium 1982-83 carrying an amount of Rs. 10,000 (Rupees ten thousand only) in cash or kind or both, a citation and a certificate.

The award is given once in two years to Indian scientists for outstanding research, fundamental or applied, including inventions, discoveries, etc. leading to results of practical value in any field or subject within the purview of research in agricultural, animal husbandry and fisheries, including agricultural economics, agricultural statistics and nutrition. Only results of researches/contributions made during the five years preceding the year of award shall be considered for the award. In the case of claims based on evolution of new varieties/strains, the final trials should have been completed within five years preceding the year of award.

Nominations can be made amongst others by Vice-Chancellors of agricultural universities/general universities with faculties of agricultural or biological sciences, Directors of research institutes, including Principals of agricultural and veterinary colleges, Presidents of scientific societies and academies and heads of the principal scientific establishments in the country such as CSIR, BARC etc.

Nominations for the award should be supported by a statement of work, achievement, accomplished or performed by the candidate who is being nominated and a reasoned justification for the nomination together with reprints of publications or other supporting data. In all matters, decision of the Council shall be final and no correspondence on this account will be entertained.

The last date for receiving the nominations for the award is **30th April, 1984.** The last date for candidates in the Andaman and Nicobar Islands, Lakshadweep States/Union Territory in the North Eastern Region, Ladakh Division of J&K State & Sikkim is **16th May, 1984.** Proposals (in quadruplicate) on the prescribed proforma for the award should be sent in a sealed cover marked 'Confidential' to Shri K.S. Krishnaswami, Additional Secretary(A), Indian Council of Agricultural Research, Krishi Bhawan, New Delhi-110001. The copy of the proforma can be obtained from him by sending a self addressed envelope in the size of 27 cm x 12 cm. Applications/nominations received without four sets of reprints of publications are liable to be rejected at the scrutiny stage.

HARI OM ASHRAM TRUST AWARDS FOR THE YEAR 1984.

Nominations are invited for the Hari Om Ashram Trust Awards for the year 1984. Three awards of the value of Rs. 10,000 each in cash or kind or both are given every year for outstanding original research, fundamental or applied, including inventions, discoveries etc. leading to results of practical value in any field or subject within the purview of research in agricultural sciences, forest farming and social forestry and animal sciences (including fisheries).

All scientists engaged in research in the fields of agriculture, forest farming and social forestry, animal husbandry and allied sciences in India shall be eligible for the awards. The results of research achieved/ contributions made during the five years preceding the year of the award shall only be considered for the awards. In the case of claims based on evolution of new varieties/strains, the final trials should have been completed within five years preceding the year of award.

Nominations can be made amongst others by Vice-Chancellors of agricultural universities or other universities having faculty of agricultural or biological sciences, Directors of Research institutes including Principals of agricultural and veterinary colleges, Presidents of scientific societies, academies and heads of the principal scientific establishments in the country.

Nominations for the awards should be supported by a statement of work. achievement accomplished or performed by the candidate who is being nominated and a reasoned justification for the nomination together with reprints of publications or other supporting data.

The last date for receiving nominations for the awards is **30th April, 1984.** The last date for candidates in the Andaman and Nicobar Islands, Lakshadweep States/Union Territory in the North Eastern Region, Ladakh Division of J&K State & Sikkim is **16th May, 1984.** Five copies of the nominations on the prescribed proforma for the award should be sent in a sealed cover marked 'Confidential' to Shri K.S. Krishnaswami, Additional Secretary (A), Indian Council of Agricultural Research, Krishi Bhawan, New Delhi-110001. The copy of the proforma can be obtained from him by sending a self addressed envelope in the size of 27 cm x 12 cm. Applications/nominations received without five sets of reprints of publications are liable to be rejected at the scrutiny stage.

DR. RAJENDRA PRASAD AWARD FOR THE BEST ORIGINAL STANDARD WORKS IN HINDI ON AGRICULTURE INCLUDING ANIMAL SCIENCES AND FISHERIES—1984

Applications are invited for Dr. Rajendra Prasad award for the year 1984 for standard original books/manuscripts in Hindi on agriculture, including animal sciences and fisheries published/written between April, 1983 to March, 1984. Books written by more than one author can also be considered. Five copies of the books/manuscripts for the award may be sent in a sealed cover marked 'Confidential' to Shri K.S. Krishnaswami, Additional Secretary (A), Indian Council of Agricultural Research, Krishi Bhawan, New Delhi-110001, latest by **30th April, 1984** in a prescribed form obtainable from him. The last date for candidates in the Andaman and Nicobar Islands, Lakshadweep States/Union Territory in the North Eastern Region, Ladakh Division of J&K State & Sikkim is **16th May, 1984.**

In all matters relating to the award the decision of the Council shall be final and no correspondence on this account will be entertained.

FAKHRUDDIN ALI AHMED AWARD FOR AGRICULTURAL RESEARCH IN TRIBAL AREAS FOR THE BIENNIUM 1982-83

Nominations are invited for the Fakhruddin Ali Ahmed Award for agricultural research in tribal areas for the biennium 1982-83. Two prizes of the value of Rs. 10,000 (Rupees ten thousand only) each in cash or kind or both will be awarded for outstanding original research carried out in the tribal areas in the field of agricultural sciences and animal sciences including fisheries.

All research workers engaged in research in agriculture, animal husbandry, fisheries and allied sciences in tribal areas (tribal areas for this purpose are those notified by the Ministry of Home Affairs, Govt. of India) shall be eligible for the award. The results of research achieved/contributions made during the five years preceding the year of the award shall only be considered for the award. In the case of claim based on evolution of new varieties/strains the final trials should have been completed within five years preceding the year of the award.

Nominations can be made, amongst others, by the Vice-Chancellors of the agricultural universities or other universities which have a faculty of agricultural or biological sciences, Directors of research institutes including Principals of agriculturals and veterinary colleges, Presidents of scientific societies, academies and heads of principals scientific establishments in the country such as Council of Scientific and Industrial Research, Bhaba Atomic Research Centre etc. Each nomination for this award should be accompanied by a detailed statement of work and attainments of the nominee and a reasoned justification for the nominations together with the reprints of publications or other supporting data. Also, a certificate of residence in the tribal area where the work was done obtainable from Head of the Institutes, should be appended. It is emphasised that the award is intended for recognising outstanding research carried out in **tribal areas** and hence the scientist(s) concerned should have lived and carried out the research in any of the tribal areas notified by the Ministry of Home Affairs.

The last date for receiving nominations/applications is **30th April, 1984.** The last date for candidates in the Andaman and Nicobar Islands, Lakshadweep States/Union Territory in the North Eastern Region, Ladakh Division of J&K State & Sikkim is **16th May, 1984.** Four copies of the nominations on the prescribed proforma for the award should be sent in a sealed cover marked 'Confidential' to Shri K.S. Krishnaswami, Additional Secretary(A), Indian Council of Agricultural Research, Krishi Bhawan, New Delhi-110001. The copy of the proforma can be obtained from him by sending a self addressed envelope in the size of 27 cm x 12 cm. Nominations received without four sets of reprints of publications are liable to be rejected at the scrutiny stage.

JAWAHARLAL NEHRU AWARDS FOR OUTSTANDING POST-GRADUATE RESEARCH IN AGRICULTURE—1984

The Indian Council of Agricultural Research invites applications from post-graduate students who have obtained their Ph.D. degree during the year 1983 in the fields of agriculture/animal sciences (including fisheries) and home science for "Jawaharlal Nehru Award for Outstanding Post-graduate Research in Agriculture—1984." There will be ten prizes of Rs. 5,000/- each for outstanding research work of the following nature :—

"Which may have bearing on finding a solution to any important national problem in the field of Agriculture, which is likely to have an impact on increasing the production or improving the quality of any important crop for human nutrition or animal productivity or increasing the technological efficiency of any process of economic importance connected with agriculture".

Candidates shall be required to submit the following documents through the Head of the Institute from where the thesis has been obtained:—

(1) A copy of the thesis submitted by them for the award of the doctoral degree.

(2) A certificate from the guide of the candidate for Ph.D. degree stating the extent to which the work is the candidate's own contribution.

(3) 6 Copies of the synopsis indicating precisely and in concise terms the work done by the candidate.

(4) 6 Copies of the bio-data with complete address for correspondence with telegraphic address if possible.

The certificate awarded to the candidate for Ph.D. degree may also be sent. There is no prescribed proforma for applying for this award. Each candidate will be judged on the basis of the originality and the applied value of the investigations as revealed in the thesis submitted by him. In all matters relating to the award the decision of the Council shall be final and no correspondence on this account will be entertained.

Application with complete documents as mentioned above addressed to Shri K.S. Krishnaswami, Additional Secretary(A), Indian Council of Agricultural Research, Krishi Bhawan, New Delhi-110001 should be sent so as to reach on or before **30th April, 1984.** The last date for candidates in the Andaman and Nicobar Islands, Lakshadweep States/Union Territory in The North Eastern Region, Ladakh Division of J&K State & Sikkim is **16th May, 1984.** The award winning thesis will be retained by the Council for record. In case the application is not accompanied by a copy of thesis and the required number of synopsis and bio-data, the application is liable to be rejected at the screening stage

UNIVERSITY OF DELHI

DELHI-110007

Advt. No. Estab. IV/84/84 **Dated, the 24th January, 1984**

Applications on prescribed form are invited for the following posts:—

Department		Designation
1. Department of English	i.	One Professor (For South Campus).
	ii.	One Reader (For post M.A. Course in the teaching of English as a second language).
	iii.	Two Readers (One for South Campus).
2. Department of Urdu		One Research Associate.
3. Computer Centre		One Senior Programmer.
4. Modern European Languages (for South Campus)		Two Junior Assistant-cum-Typists (One each in French & German).
5. University Library System		Two Machine Operators (Majox).
6. Central Office	i.	Statistician—One.
	ii.	Statistical Assistant—One.

Scale of Pay of the Posts Are

Professor : Rs. 1500-60-1800-100-2000-125/2-2500.

Reader : Rs. 1200-50-1300-60-1900.

Research Associate : Consolidated monthly emoluments as Under :—

Rs. 1100/p.m. (fixed)
Rs. 1300/- p.m. (fixed)
Rs. 1500/- p.m. (fixed)
(On the recommendation of the Selection Committee).

Senior Programmer : Rs. 1100-50-1600.

Junior Assistant-Cum-Typist/Machine Operator : Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.

Statistician : Rs. 700-40-900-EB-40-1100-50-1300.

Statistical Assistant: Rs. 425-15-500-EB-15-560-20-700-25-800.

All posts, except that of Research Associate carry D.A., C.C.A., and H.R.A. as admissible under the rules in force in the University from time to time.

Essential Qualifications

Professorship :

An eminent scholar with published work of high quality actively engaged in Research. Ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Readerships

Good academic record with at least second class Master's degree in a relevant subject with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) Research, or (ii) innovation in teaching methods or (iii) production of teaching materials. Five years' experience of teaching in under-graduate/post-graduate classes and/or post-doctoral research work with evidence of published work.

Note: Second Class would mean at least 50% marks in the subject or equivalent grade.

Research Associate

Consistently good academic record with first or high second class (B+) Master's Degree or an equivalent degree of a foreign University in the subject concerned.

Note: Initial appointment will be for a tenure period of three years extendable by another two years only. In no case the tenure will extend beyond 5 years in all.

Senior Programmer

(a) Atleast a second class (not less than 50% marks in the aggregate) Master's Degree in Mathematics, Statistics, Econometrics, Operational Research or Physics.

OR

At least a second class (not less than 50% marks in the aggregate) Bachelor's Degree in Engineering from a recognised institution; and

(b) (i) Atleast five years' experience in Computer Programming at a recognised institution, and

(ii) Knowledge of atleast one of the high level languages like Fortran, Cobol, Algol, PL/1 and extensive experience of developing programmes for complex problems;

OR

A Ph.D. Degree from a recognised institution in Computer related disciplines like Systems Programming, Numerical Analysis, Artificial Intelligence, Theory of Computability and Theory of Formal Languages.

Note: "Relaxation of any of the qualifications may be made in exceptional cases for the post of Senior Programmer on the recommendation of the Selection Committee".

Junior Assistant-cum-Typists (French/German):

Matriculation with minimum speed of 25 w.p.m. in typewriting in the **language concerned.**

Note: Candidates will be required to appear and qualify the prescribed tests in General English, language concerned, and typewriting in the relevant language to be conducted by the University.

Machine Operator

(i) Proficiency in running of Photocopying Machines.

(ii) Ability to do day-to-day maintenance of Photocopying Machines.

(iii) Three years experience in the trade.

(iv) Education : Middle Standard.

Statistician

At least high second class Master's degree in Statistics, with good academic record.

Statistical Assistant

Master's degree in Mathematics or Statistics.

OR

Second Class B.A./B.Sc. with Mathematics or Statistics as one of the subjects with 3-4 years experience of Statistical work.

Special/Desirable Qualifications

Research Associate

M. Phil degree of University of Delhi or any other statutory University.

Senior Programmer

(a) Experience of participation in training programmes in computer—related disciplines.

(b) Intensive experience in System Programming on a Third Generation Computer System.

Junior Assistant-cum-Typist (French/German)

1. Advance Diploma or equivalent examination recognised by Delhi University in the language concerned.
2. Some experience of handling books in foreign languages particularly in the language concerned/office work.
3. Preference will be given to those candidates who have good knowledge of English typewriting.

Statistician

Previous experience of statistical work in a big organisation.

The prescribed application forms can be had from the Information Section of the University either personally or by sending a self-addressed envelope (size 13 cm x 28 cm) with postage stamps worth Rs. 3.45 P.

The candidates will have to produce the original documents relating to their age, qualifications, experience, etc. at the time of interview.

Applications (separate for each post) accompanied by attested copies of Degrees, other certificates, marksheets, published research articles etc. should be addressed to the Registrar.

The last date prescribed for receipt of the application is **6-3-1984**.

Note:
1. It will be open to the University to consider the names of suitable candidates for teaching posts who may not have applied. Relaxation of any of the qualifications may be made in exceptional cases, in respect of all teaching posts on the recommendation of the Selection Committee.
2. Canvassing in any form by or on behalf of the candidates will disqualify.
3. Candidates from outside Delhi, for teaching posts only, called for interview will be paid to and fro single second class rail fare.
4. The University reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant.

REGISTRAR
University of Delhi

PANJAB UNIVERSITY
CHANDIGARH

(Advertisement No. 2/84)

Applications are invited for the following posts so as to reach the Registrar, Panjab University, Chandigarh, alongwith postal order of Rs. 10/- by **7-3-1984**. Fourteen days extra time is permissible to the persons who have to submit their applications from abroad.

1. **Professors** : (Rs. 1500-60-1800-100-2000-125/2-2500).

Education-1; Ancient Indian History, Culture & Archaeology-1; Statistics-1; Philosophy-1; Law-1; Physics-1; Zoology-1.

2. **Readers** : (Rs. 1200-50-1300-60-1900).

Ancient Indian History, Culture & Archaeology-1; Sociology-1; Economics-2; Psychology-2; Political Science-2; Philosophy-1; History-2; Public Administration-2; Commerce & Business Management-1; Education-1; Fine Arts-1; English-1; Hindi-1; School of Punjabi Studies-1; Zoology-1; Anthropology-1; Biochemistry-1 and Chemistry-1.

3. **Lecturers** (Rs. 700-40-1100-50-1600) Economics-2; Philosophy-1; Commerce & Business Management-1; Education-1; Law-3; Sanskrit-1; Geography-2; Urdu-1; Persian-1; Panjabi Lexicography Unit-2 (School of Panjabi Studies).

4. **Research Scholar-1** (Rs. 600/- p.m. (Fixed).

(Department of Central Asian Studies).

10% of the Scholarships/Fellowships will be reserved for Scheduled Castes and Scheduled Tribes candidates provided they fulfil the minimum qualifications laid down for the award of such Scholarships/Fellowships. In case qualified candidates are not available the reserved Scholarships/Fellowships will be treated as unreserved. **The candidates whose results for the qualifying examinations are not declared by the closing date, may also apply. They shall intimate their results (if otherwise eligible) to the concerned Department before the date fixed for selection.**

Candidates for the posts of Professors and Readers who do not possess a doctoral degree are required to submit 10 typed/cyclostyled copies of brief resume of their published work. 15% posts of Lecturers will be reserved for the members of the Scheduled Castes and 2% for the members of the Scheduled Tribes, but these will be filled up by others if no suitable Scheduled Castes/Scheduled Tribes applicant is available.

Application forms alongwith detailed qualifications and Instructions etc., can be obtained from the Cashier, Panjab University, Chandigarh, personally on payment of Rs. 2/- or by making a written request to the Deputy Registrar (Estt.) Panjab University, accompanied by self addressed stamped envelope of 23 x 10 cms and a postal order of Rs. 2/- drawn in favour of the Registrar, Panjab University, Chandigarh.

FOR DETAILS SEE INSTRUCTIONS FOR CANDIDATES ENCLOSED WITH THE APPLICATION FORM.

REGISTRAR

POST GRADUATE & RESEARCH COMPLEX
HYDERABAD

Dakshina Bharat Hindi Prachar Sabha

Applications are invited on the prescribed form for the following post on or before **29-2-1984** on the follow address : REGISTRAR, POST GRA DUATE & RESEARCH COMPLEX DAKSHINA BHARAT HIND PRACHAR SABHA, POST BO NO. 82, KHAIRATABAD, HYDE RABAD-500 004.

Professor of Hindi

Scale of Pay : Rs. 1500-2500+Usual Allowances.

Qualifications : An eminent scholar with published work of high quality actively engaged in research in Hindi Literature/Hindi Linguistics. Ten years experience of Teaching and Research, Experience of guiding research at Doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Desirable Qualifications : The applicant should be able to provide leadership and orientation to studies in Comparative Literature, Contrastive Linguistics and Functional Hindi. Knowledge of South Indian Languages is preferred.

V. Anjaneya Sarma
REGISTRAR

THE UNIVERSITY OF KASHMIR
SRINAGAR

Advertisement Notice

Applications which should reach this Office latest by **10-3-1984** are invited for the post of Reader (Temp., likely to become permanent) available in the Iqbal Institute. The prescribed application forms can be had from the University office on cash payment of Rs. 15/- or by sending a crossed postal order of the equal value drawn in favour of the Registrar of this University cashable at Srinagar Post Office alongwith a self addressed envelope (5" x 11") with the necessary postage.

Candidates are advised in their own interest to send their detailed curriculum vitae in advance.

Details in respect of qualifications etc. prescribed for the post can be had from this office.

Peerzada Ghulam Hassan
SPECIAL OFFICER (Admn)

UTKAL UNIVERSITY

Advertisement No. Estt. I/886-C/VI Plan/A-6198/84 **Dated : 3-2-84**

Applications in Seven copies are invited in the prescribed form alongwith attested copies of certificates and Mark lists of all examinations passed for the following posts in the Post-Graduate Departments of the University on or before the **5th March, 1984**. All the posts are Temporary and likely to be made permanent.

Sl. No	P.G. Department	Post	Number	Specialization
1	2	3	4	5
1.	ENGLISH	Professor	One	
		Reader	One	
2.	HISTORY	Professor	One	
		Reader	One	
		Lecturer	One	With Sanskrit as a Subject at the Degree stage.
3.	POLITICAL SCIENCE	Professor	One	
		Lecturer	One	
4.	ANALYTICAL AND APPLIED ECONOMICS	Professor	One	
		Reader	One	
		Lecturer	One	
5.	ANTHROPOLOGY	Professor	One	Physical Anthropology/Prehistoric Archaeology
		Reader	One	
		Lecturer	One	
6.	BOTANY	Professor	One	Mycology or Microbiology or Plant Pathology or in Cytogenetics
		Reader	One	
		Lecturer	One	
7.	CHEMISTRY	Professer	One	Organic Chemistry.
		Reader	One	Physical Chemistry Spectroscopy and Structure determination.
		Reader	One	
		For collaborative		Programme with Physics.
		Lecturer	One	Theoretical Chemistry
8.	GEOLOGY	Professor	One	
		Reader	One	
9.	GEOGRAPHY	Professor	One	
		Reader	One	
		Lecturer	One	
10.	MATHEMATICS	Professor	One	
		Reader	One	
11.	PHYSICS	Professor	One	Solid State Physics.
		Reader	One	
		Reader	One	Electronics.
		For Collaborative		programme with chemistry.
		Lecturer	One	Electronics.
12.	STATISTICS	Professor	One	Applied Statistics.
13.	ZOOLOGY	Professor	One	Endocrinology and Reproductive Physiology or Cytogenetics.
		Reader	One	Entomology.
14.	COMMERCE	Reader	One	
15.	ORIYA	Reader	One	
		Lecturer	Two	
16.	PHILOSOPHY	Reader	One	
		Lecturer	One	
17.	SOCIOLOGY	Reader	One	
		Lecturer	One	
18.	LABOUR WELFARE	Reader	One	
		Lecturer	One	
19.	SANSKRIT	Reader	One	
		Lecturer	Two	

1. **Scale of Pay**
   - (i) Professor : Rs. 1500-60-1800-100-2000-125/2-2500/-.
   - (ii) Reader : Rs. 1200-50-1300-60-1900/-.
   - (iii) Lecturer : Rs. 700-40-1100-50-1600/-.
2. **Age of Superannuation :** 60 (Sixty years).

Essential Qualification

Professor

An eminent scholar with published work of high quality, actively engaged in research. About ten years' experience of teaching and/or Research. Experience of guiding research at Doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Reader

Good Academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) Research or (ii) Innovation in teaching methods or (iii) Production of teaching materials.

About five years' experience of teaching and/or research provided that at least three or these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record of Teaching/Research.

Explanation

For determining "good academic record" the following criteria shall be adopted.

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

Lecturer

(a) A doctorate's degree or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programme; the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's egree or equivalent, research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M. Phil. or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

Explanation

For determining "good academic record" the following criteria shall be adopted:

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing a second class Master's degree should have obtained first class in the Bachelor's degree.

Persons having secured marks more than the mid point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a University shall be deemed to have passed that examination in the high second class.

Prescribed application forms can be had from the Registrar, Utkal University in person on payment of Rs. 7.60 including local sales tax (Rupees Seven and Paise sixty) only or by post on receipt of a Crossed Indian Postal order for Rs. 10/- (Rupees ten only) payable to the Registrar, Utkal University, Vani Vihar, Bhubaneswar-751004.

REGISTRAR

NORTH-EASTERN HILL UNIVERSITY

Lower Lachumeire : Shillong

No. F. 2-1/Admn/84

Dated the 19th January, 1984

Applications on plain paper are invited from Indian citizens for the post of Executive Engineers, Assistant Engineers, Junior Engineer, Work Assistants of the University in its Campuses at Shillong (S), in Meghalaya and Aizawl (A) in Mizoram, and Nagaland Campus. Indicating names, address, date of birth, details of Academic qualifications giving the divisions and percentages of marks at each stage beginning from High School, experiences with details of institution, certificates, testimonials etc. and No Objection from employers. The posts are temporary for execution of the University Campus Projects, some of which may be retained in the normal phase after the works have been completed.

The applications accompanied by Indian Postal Order of Rs. 10.00 (Rs. 2.50 for SC/ST) payable to NEHU, Shillong should reach the undersigned on or before **15th March, 1984.**

Candidates for the post of Executive Engineer, Assistant Engineer and Junior Engineer called for interviews will be paid T.A. as per University Rules.

Shillong Campus
Executive Engineer : 2
Asstt. Engineer : 3
Work Asstts. : 4

Aizawl Campus
Executive Engineer : 1
Junior Engineer : 1
Work Asstt. : 1

Nagaland Campus
Assistant Engineer : 1
Work Asstt. : 1

Scale of Pay

(i) Executive Engineer : Rs. 1100-50-1600/- p.m.

(ii) Asstt. Engineer : Rs. 650-30-740-35-810-EB-35-880-40-1000-EB-40-1200/- p.m.

(iii) Junior Engineer : Rs. 425-15-500-EB-15-560-20-700/- p.m.

(iv) Work Asstt. : Rs. 260-8-300-EB 8-340-10-380-EB-10-430/- p.m.

Qualification

(i) Executive Engineer : Must have passed the final degree Examination in B.E./B.Tech./B.Sc. Engineering in Civil Engineering from a recognised University/Institution or must have passed Section 'A' & 'B' of the A.M.I.E. Examination of the Institution of Engineers (India) with an Experience of at least 10 to 15 years as Asstt. Engineers or S.D.O. (PWD) and 5 to 7 years as Executive Engineer in Govt. Deptt./MSEB/ASEB/etc.

Age : Must not be less than 45 years and more than 50 years on 1st March 1984. Preference will be given to those candidates who have sufficient experience in the line for more than 5 years as Executive Engineer having the administrative capacity.

(ii) Must have passed the final degree examination in B.E./B.Tech./B.Sc. Engineering in Civil Engineering from the recognised University/Institution or must have passed the Section 'A' & 'B' of the A.M.I.E. Examination of the Institution of Engineers (India).

Preference will be given to candidates who have sufficient working experience in the above line for more than 5 years.

Age : Candidates must not be less than 21 years of age and not more than 45 years on 1st March, 1984. The maximum age limit is relaxable in case of candidates from the Central/State-Government and in case of specially experienced candidates.

Junior Engineer : Matriculation or P.U.C. must have passed the Diploma in Civil Engineering from the recognised Institute, having vast experience in Civil works construction.

Preference will be given to those candidates who have sufficient experience of more than 5 (five) years in the line.

Age of the Candidates : Must not be less than 21 years of age and not more than 27 years on 1st March, 1984. The maximum age limit is relaxable in case of candidates from the Central/State Government and in case of specially experienced candidates.

Work Assistant : Must have passed matriculation or H.S.L.C. examination with experience in the line.

Age of the Candidates : Must not be less than 18 years of age and not more than 25 years on 1st March, 1984. The maximum age limit is relaxable in case of candidates from the Central/State Government and in case of specially experienced candidates.

Mrs. M.R. Mawlong
REGISTRAR

THE UNIVERSITY OF BURDWAN

RAJBATI : BURDWAN
WEST BENGAL

Advertisement No. 10/83-84

Dated : 2 February, 1984

Applications in the prescribed form are invited for the post of Registrar, University of Burdwan in the aproved Scale of Pay of Rs. 1500-60-1800-100-2000-125/2-2500/-. The post carry dearness and other allowances, and pensionary benefits according to the Statutes of the University.

Educational Qualifications & Experience

(a) **Essential**

(i) Uniformly good academic record with a B+Master's degree or its equivalent.

(ii) At least 10 years' experience in Academic Institutions like University or in an Institute of higher learning of which 5 years must be in high level administration in a University or in an Institute of Post Graduate Study.

(iii) Age not less than 40 years. Relaxable in the case of exceptionally qualified candidate.

(b) **Desirable**

(i) A Doctorate Degree or published research work of merit;

OR

(ii) High level administrative experience in a Government or Quasi Government organisation or a good background in administration and management in senior position.

Provided that in the absence of suitable candidates having the required administrative experience, the essential qualifications pertaining to administrative experience required for the post may be reduced or waived on the recommendations of the Selection Committee if the candidate has been either a Professor/Reader/Principal for at least two years. For candidates having the required administrative experience, the essential academic qualifications may be relaxed on the recommendations of the Selection Committee but the selected candidates must have at least the academic qualifications prescribed for teachers of Colleges.

The choice of the Selection Committee may not necessarily be confined to those who apply formally.

For application form and other information apply to the Registrar with a self-addressed stamped (80 paise) envelope (9" x 4") with the requisite fee of Rs. 5/- within **February 28, 1984.**

A.K. Chaudhuri
REGISTRAR

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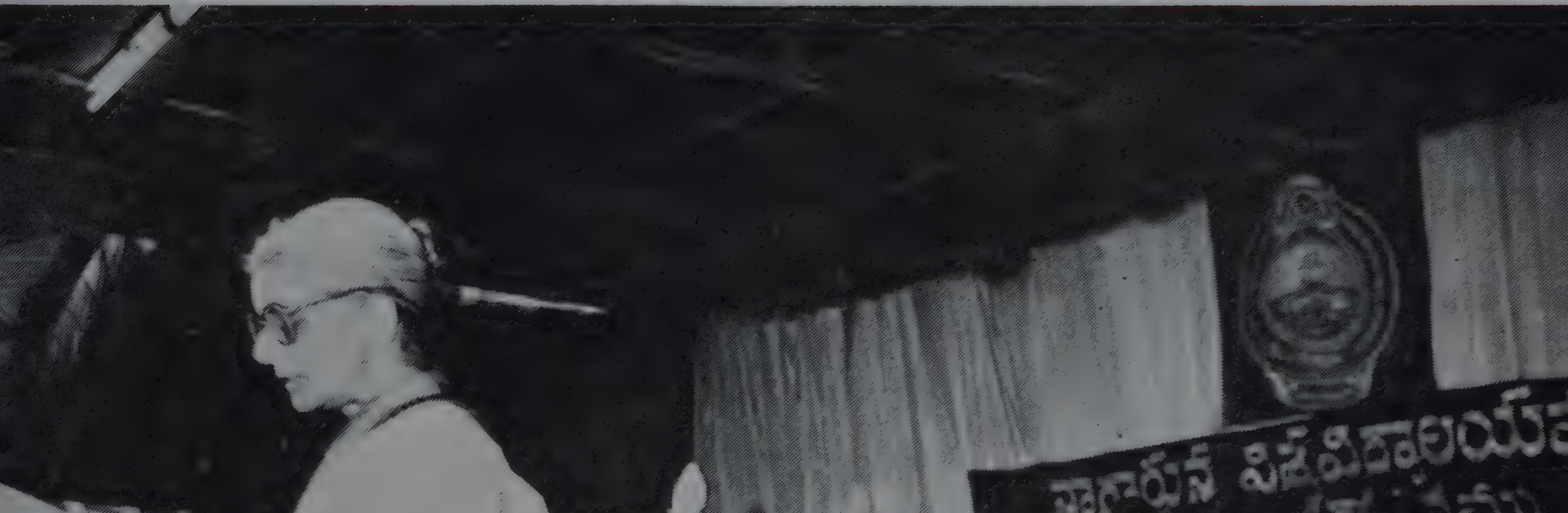

నాగార్జున విశ్వవిద్యాలయ
కోత్సవము

Smt. Radha Burnier, President, International Theosophical Society, delivering the convocation address at the Nagarjuna University, Guntur.

GUJARAT VIDYAPITH

Mahatma Gandhi Campus, Ashram Marg,
Ahmedabad-380014, Gujarat (India)

PRINCIPAL OBJECT

Founded by Mahatma Gandhi on 18th October, 1920 with the principal object to prepare through education, workers of character, ability, culture & conscientiousness for the conduct of the programmes of national regeneration, through means not inconsistent with Truth & Non-violence. In laying down priorities of education—equal importance to the Intellectual & Manual training. Knowledge of all religions for spiritual development and principal consideration to the needs of village dwellers, will be given.

Since 1963 the Gujarat Vidyapith is a 'deemed to be a University' under Section 3 of the U.G.C. Act. It is also a member of the Association of Indian Universities.

- Facilities for visiting scholars & visiting students through well established library service with over 3,00,000 volumes, along with reprography & documentation service.
- Some Junior Research Fellowships of Rs. 600/- p. m. for M. Phil./Ph.D. studies available in all subjects.
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- Hostel facilities based on Gandhian community life.

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   3. Social Work
   4. History & Culture
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   5. Adult Education Resource Centre and Centre for Continuing Education.
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EDUCATION FOR LIFE THROUGH GANDHIAN WAY OF LIFE

7 MAR 1984

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Editor :
M.S. RAMAMURTHY

Foodgrain Production and Relevance of Agricultural Research in India

Text of the Sixteenth Lal Bahadur Shastri Memorial Lecture delivered by Dr. S. S. Johi, Vice-Chancellor, Punjabi University, at the Indian Agricultural Research Institute, New Delhi.

India has made a phenomenal progress on the food front over the past three decades. From a level of some 51 million tons in 1951-52 the country would be producing over 142 million tons of foodgrains in the year 1983-84 (58.9 million tons in Rabi and 83.4 million tons in Kharif). This is a quantum jump of some 10 million tons in one year. However, imports of foodgrains have not been totally dispensed with as yet. Even in this year of bumper production imports would be at 2.5 million tons (Wheat 2.13 million tons and Rice 0.37 million tons). These imports are primarily meant for an effective management of the food economy. It would be remembered that net imports had touched 10.34 million tons in the year 1965-66 and declined appreciably only in the late seventies. Considering five-yearly intervals, net average foodgrain imports per year amounted to :

Period	Average net imports per year (million tons)
1961-62 through 1965-66	6.45
1966-67 through 1970-71	4.76
1971-72 through 1975-76	4.54
1976-77 through 1980-81	—0.28
1979-80 through 1983-84	+0.99

Thus, foodgrain imports, indicating food deficits decreased markedly in the late seventies and whatever imports were effected, those were mainly for keeping comfortable buffer stocks.

As a result, in spite of the fast increasing population, per capita availability of domestic foodgrains increased from 145.7 kg in 1951-52 to 196.6 kg. in 1981-82. In 1983 per capita availability is estimated to be above 200 kg. Details of foodgrain availability as it changed over a period of three decades are as under :

Year	Per capita availability in Kg.				
	Foodgrains	Rice	Wheat	Other Cereals	Pulses
1951-52	145.7	59.6	17.3	45.1	23.6
1981-82	196.6	79.2	53.9	44.7	16.8

It may be noted that increased availabilities have changed in terms of contents of the total food-mix. Share of superior grains (wheat and rice) has increased at the cost of inferior grains (other cereals) and pulses. The decrease in the availability of pulses is, however, disquietening, because it is the major source of proteins for the Indian population.

It is through a sustained effort on development of better crop varieties, improved production technology, its effective carriage to the farmers, creation of appropriate infra-structure as well as conducive policy environment for the adoption of improved technology by the farmers and manipulation of other enabling factors that within these three decades not only the country has trebbled the production of foodgrain, more so the lowest level of production has been put on a higher base. While the country may not as yet be able to claim having achieved a high degree of stability in foodgrain production, it is certainly on a more sure footing. Troughs in production through this period have moved at a higher and higher plane at a rate of 7.44 per cent per annum. The extent of variations around average has not, however, changed much as is indicated below:

Period			Average yearly production	Percent variation from average	
				Highest	Lowest
1961-62	through	1965-66	83.04	19.65	12·87
1966-67	through	1970-71	94.60	14.61	21.53
1971-72	through	1975-76	105.54	14.68	4.86
1976-77	through	1980-81	121.65	7.99	9.82
1979-80	through	1983-84	128.54	10.47	14.65

Higher levels of production based on constantly improving production technology, involves a high degree of uncertainty, and fragility. This is exactly where the weakness in the food economy of the country lies. This explains that in spite of the highest level of production expected this year and fairly high level and sustained production of foodgrains over the past three years, India does not feel fully secure on the food front and is importing foodgrains this year costing around Rs. 335 crores, which is an avoidable drain on the public exchequer.

How can we deal with the problem? This is a crucial question which demands an apt attention of the scientists and the policy makers of the country today. We have to keep in mind that while India increased its food production from 52 million tons in the year in 1951-52 to over 142 million tons this year, its population also increased from 351.2 million persons to 676.9 million persons in 1981-82. As a result the total foodgrain demand and off-take from the public distribution system increased, which stands at about 1.4 million tons per month today. This amounts to some 17 million tons off-take per year. In the face of this, procurement of foodgrains (wheat and rice) this year is estimated to be 16.3 million tons (8.28 million tons wheat and a little over 8 million tons rice). This explains the anxiety of the country on the food front leading to the marginal imports. However, we have to keep in mind that in the bumper crop years, when procurement increases, total market demand and off-take from public distribution system tend to decline. There may not, therefore remain any gap between the actual demand and the current supplies. Thus, imports would probably strengthen the buffer stocks only. Yet, the situation has eased to this extent mainly because of a quantum jump in domestic production in one year. Production policy and strategy has, no doubt, contributed much to this phenomenal increase, yet favourable weather also played a very significant role. Thus, if we have been able to make the tortoise win in the malthusian race between production, and reproduction there always remains a high degree possibility of the tortoise losing any time, as and when the weather gods wish that way. Thus, the malthusian devil has been temporarily chained, but it has not been contained permanently.

Even at the cost of degression, I would like to emphasize that in this race between production and reproduction, the population growth in its rate and quantum is a very important side of the equation. No doubt considerable effort has been made on population control, yet the rate of growth has not declined cognizably. Marginal reduction in the rate of population growth does not make any significant impact on the increasing number of mouths to be fed being added annually, because of very large and constantly expanding population base of the country. The effort to contain population might look very impressive in terms of funds provided, propaganda made, cases handled etc., yet the impact of these programmes is not such that would put the food availability in the country on a sure footing. Something much more needs to be done. India has to devise and adopt an effective policy where some stringent steps should be taken to control the population of the country. Absolute restrictions through mandatory sterilization are a must on the couples in reproductive stage who have two or more than two children. It may look to be a drastic measure but there is no alternative to it. It is not the economic incentives and disincentives pertaining to the family planning programmes that would achieve the goal. Only a marginal number of couples would be deterred by the disincentive policy or would avail of incentive provisions under these programmes. The large mojority of the couples in the reproductive stage would remain outside of these programmes which would be more than enough to thwart any effort on the production front and would not permit the availability of foodgrains to increase, as we may wish.

Apart from controlling the population with a target to achieve zero growth, it is also important to initiate programmes of population planning. With the existing set of policy measures within the framework of incentives and disincentives provided under the family planning programme, the poorer, backward and illiterate sections and individuals of the society are by and large left out. Addition of children to their families does not prove to be much of a liability, at the living standards they have today. They are living with the minimum or total lack of amenities of life wherefrom no further deterioration is possible. An additional child growing up in such an environment is considered to be an additional earning hand. Thus, it leaves no incentive or desire on the part of the individuals in these segments of the society for adopting family planning measures. On the other hand, well-to-do and educated individuals and segments of the society have taken to the family planning measures more wholeheartedly. Thus, the impact of population control measures has tilted towards better off segments of the society. This has created an imbalance in the quality of the poputation and this imbalance is growing fast. Those who can afford to feed, educate and bring up their children in a better manner are containing their family size and those who do not have resources to bring up their children with reasonable nutrition, education and care are increasing in number. Therefore, a target group oriented approach in population planning needs to be adopted in a vigorous manner so that population control measures are directed more vigorously towards the poorer, backward, uneducated and resourceless people. The policy makers need to direct their pointed attention to this aspect, otherwise all the efforts made at increasing food production, which directly and indirectly account for more than one-fifth of the provisions in the state exchequer, would be thwarted at the population front. Our population levels have reached a stage that we must channel our major effort towards containing the population in precedence over any other developmental programmes in the country.

On the other side of the equation, it has been variously estimated that production of foodgrains in India can be easily increased by 100 to 150 per cent over the present level. I have elsewhere estimated that within a period of about one decade production can be easily increased by 110 per cent i.e. about 30 per cent through extension of cultivation to the cultivable lands (mostly current fallows and permanent fallows) 20 per cent through increasing intensity of cropping and 60 per cent through the management factor involving the adoption of improved production technology and provision of extension education services. This potential does not take into account the improvements in production technology which would be introduced through time as a natural process. Thus, in view of the potential that exists in terms of improvements in production and productivity, the emphasis in future needs to be placed on increasing production with stability which on the one hand requires constant improvement in production technology and on the other management of production environment to reduce the influence of external inhibiting factors.

Improvement in production technology would not only mean enhanced genetic potential of the foodgrain crops or their agronomy or required plant protection measures. It also involves enhancing the resistance level of these crops to the environmental factors including droughts, excessive water, pests and diseases. High yielding crops are generally more susceptible to pests, diseases and other environmental factors unless they are specifically bred for the purpose. With the change in varieties and bio-types, adopted on a wide scale, pest and disease patterns change. Weed complex also keeps changing constantly. For example, if we look back about two decades Pohli (*Carthamus oxycantha*) and Piazi (*Asphodelus tenuifolius*' were the two most common abnoxious weeds of economic importance in the wheat crop in the northern and north-west India. Due to the increased intensity of cropping (wheat followed by rice) in these areas, these weeds are now conspicuous by their absence. Instead flaris minor and wild oats have become the most common weeds. These are only a couple of examples of the change in the weed complex, giving rise to a new set of problems to be tackled. Similarly, diseases and pests have changed in their mix, occurrence patterns and virulence. For example in the areas where wheat crop is followed by rice, field-rat problems have been eliminated, but in the areas where the intensity of cropping has increased with crops like ground-nut, pulses, cotton, sugarcane etc., the problem has become more serious. Similarly, resistance and virulence patterns of diseases and insect pest problems have changed to render the traditional control measure in-effective in several cases. Thus, there is a constant race between the man and the diseases and pests in the changing environment, where he has to keep his nose ahead in order to win the race.

I do not wish to expatiate on these issues which are well-known to the agricultural scientists and administrators. My only point of emphasis is that our thrust in research must change from a traditional approach of overly emphasis on improving the genetic potential of the food crops. I do not at all mean that we should relax or reduce allocation of resources in this direction. But, must we look upon these crops in the totality of constantly changing cropping patterns and interacting environment, which is becoming more and more fragile, as the use of commercial inputs is increasing along with expansion of the crop area, verttcally as well as horizontally. The traditional approach on breeding of crop varieties through wildcrossing and accompanied selection process is not only quite wasteful, it is inadequate to meet the challenge of the future. Added emphasis must be placed on basic research of applied value utilmately aiming at breeding appropriate genotypes as well as identifying pest and disease biotypes for their effective control. Basic science departments of the agricultural universities and research institutes must shoulder their responsibilities more seriously in intimate dialogue with the applied science departments. These basic science departments need to be adequately equipped and fully strengthened so as to enable them to discharge their responsibilities with efficiency and speed. Many of the general universities in the country have strong departments of basic sciences such as those of Genetics, Zoology, Botany, Chemistry, Biochemistry etc. These university departments may be involved in the process so that (i) research facilities and capacities are not duplicated unnecessarily in the agricultural universities and institutes, dissipating the scarce national resources and (ii) capacities of the departments in general universities are utilised more productively. In turn it will improve their teaching and research interactions also.

Any activity or programme to be efficient and relevant to the social and economic needs, must operate under a conducive policy environment. For the optimality of research effort and maximum efficiency of the research system, the policy and its administration must provide the desired framework and built-in-process of automatic adjustments to the changing requirements. In the first place, it needs to be realised that research plant must expand on a sustained basis. There is no one given point on a growth path that can be considered as the optimum size. It is a process of shifting optima. Progress or development is a process of solution of series of problems. Solution of one creates more than one new problems, to the extent that often removing scarcity leads to the more serious problems of surpluses. Thus, nature of the problem(s) changes, but their magnitude does not diminish, rather it increases. This requires constant expansion and development of the research plant. Thus for a developing economy to move on an optimum growth path, financial allocations for research must increase adequately, be it any sector of the economy. This assumes more importance in the agriculture sector because of the biological nature and large number of the farm enterprises involved, locational heterogeneity and nature of equipment, laboratories and experimental facilities required. Unfortunately at this stage, almost all the research institutes and universities engaged in agriculture research and training are suffering from squeeze on the needed financial support. Whatever financial support is availabie, is project-tied or is scheme-bound, which leaves little flexibility for these institutions to make needed adjustments in their plans and programmes as may be required through time. The situation may prove to be deterimental with devastating effects on agricultural production at any time in future.

Given the resources, next issue concerns the allocation of these resources among various research activities and programmes spread over different regions of the country with proper perspective to vouchsafe for future developments. Unfortunately, at present research programmes eften do not respond to the relevant needs of the society as fast and as adequately as they should in order for us not to be caught napping. Often the impulses conveying relevance remain weak, get diluted and reach the researchers through secondary sources in a distorted form. As a result, research programmes and projects often do not remain fully relevant to the actual needs.

The situation has led to a kind of vicious circle where the researchers often do not have direct access to the actual field problems. As a result, he plans his research programmes without proper relevance an has very little flexibility for making needed adjustments in his programmes to meet with emerging situations. This leads to a horizontal expansion of pyramids of research schemes and projects with little link-up or rationalization. This results in colossal wastage of scarce research resources. Thus, inadequacy and wastage go hand in hand.

Ad-hocism in our research programmes is another debilitating factor in the research policy. Not to speak of the totally concept of the rural sector research, even the agricultural research effort is not an integrated whole. Agricultural research programme does not take adequate notice of the over-all total rural problem. Within the agricultural sector it does not knit up pragmatic problem-matrix for all embracing sustained solutions. There has remained an overly emphasis on some aspects such as improvement in genetic potential of a few crops, and to some extent on related agronomic practices and plant protection measures, almost neglecting or not paying due attention to other interacting subject-matters. Research programmes, deviod of social, economic and situational consideration do not generally hit at the totality of the problem with full force. Hence, there exists a wide gap between the genetic potential of the foodgrain crop varieties and the actual field results. We need, therefore, to develop a system with built-in-process of independent evaluation of our research projects and programmes in the context of actual benefits derived within the framework of the totality of the rural socio-economic-matrix. These continuing feed-backs emerging out of in-depth evaluation should provide appropriate corrective stimulii and directions for our reserarch programmes to keep them relevant to the actual problems on one hand and to steer them on an optimum growth path on the other.

Relevance of research to actual needs of the society cannot be over-emphasised. The most important element of our research policy, therefore, is the ultimate users of the research results. Indian agriculture is in a unique situation where over 67 per cent of the farms are small and marginal farms of the size below two hectares. These percentages, no doubt, vary from State to State and region to region, yet in overall, India is essentially a country of small farms which are starved of capital resources, have poor management-skills and not an outgoing type entrepreneurial outlook. Labour available is mostly unskilled and unmotivated. We may keep eulogising our farmers and farming skills, yet the fact remains that a large majority of farms suffer from resource incapacities and managerial inabilities. We often campare our farm size distribution with that in Japan and Taiwan and from them derive strength for our small farm policies forgetting that more than 75 per cent of the farmers in Japan are only part time farmers and more than 70 per cent of the incomes of the farm families come from the non-agricultural sector. Thus, these farms are not starved of capital because farm families are not that poor. They have a motivated family labour as well as dynamic and well-informed part-time farm entrepreneurs. Thus, Indian farms are in a uniquely unenviable situation. Our research polices and programmes, therefore, must be geared to meet with the entrepreneurial and technological problems of these small farms. Unfortunately, our research policy has not taken due cognizance of this situation. Little has been done to explore into the entrepreneurial innovations and develop situation-specific production technology and marketing systems for these millions of small farms.

We have been labouring hard under the misconception that scale-neutral technology is equally appropriate for small farms as for medium and large farms. Development of a scale neutral production and marketing technology may be an essential condition, but not a sufficient condition for its adoption on these farms. Lack of entrepreneurial skills, motivational factors and production resources as well as differentiated socio-economic environment does not admit even scale-neutral technology to take roots on these small farms. Research policy must, therefore, aim at challenging as well as enabling the agricultural researchers to develop production and marketing technologies and practices appropriate to the financial, economic, social and entrepreneurial environment of the small farms in India. This is essential to bridge the wide gap that exists between the gross genetic potential of the foodgrain crops (potential productivity multiplied by gross area under the crop) and gross actual production in order to realise our dreams of increasing foodgrain production on a sustained basis. □

Kousali Institute of Management Studies

Karnatak University, Dharwad-580003

Admission Notice

M.B.A. (Two Year Full-Time Programme)

(From 15th June, 1984 to April 1986)

Eligibility

Any Graduate of a recognised University with a minimum of second class degree securing at least 50% aggregate (all subjects) marks at S.S.L.C. or PUC/Higher Secondary AND at the degree level Examination is eligible for admission.

Admission Procedure

Eligible candidates will be called for written tests to be held at Karnatak University Campus, Dharwad in the last week of May 84. Candidates found qualified at the written test will be asked to appear in for Group Discussion and later for Personal Interview on the dates notified by the Director.

How to Apply

1. For prospectus and application forms, write to the Director, Prasaranga, Karnatak University, Dharwad-580003, along with Postal Order/Demand Draft/Challan of the State Bank of India, Karnatak University Dharwad of Rs.10/- (Rupees ten only) (non-refundable) *payable to the Finance Officer, Karnatak University, Dharwad* and self addressed envelope stamped Rs. 4.75 (25 cms x 18cms). M.O., CHEQUES OR CASH WILL NOT BE ACCEPTED.
2. Completed application forms accompanied *by the processing fee of Rs. 25/- (Rupees twenty five only)* (non-refundable), payable to the Finance Officer, Karnatak University, Dharwad by way of Postal Order/Demand Draft/Challan of the State Bank of India, Karnatak University, Dharwad must reach the Chairman (Admissions) Kousali Institute of Management Studies, Karnatak University, Dharwad-580003 on or before **30th April 1984.**

Note

1. Reservation for SC/ST, Economically and Socially Backward as per Government Rules.
2. Candidates appearing for final part of degree examinations in April/May 1984 may also apply provided they have a minimum of 50% marks at the Ist & IInd parts of the degree examinations and that the final marks sheet is made available on or before **15th June, 1984.**
3. Canvassing of any kind will be a disqualification.
4. Candidates seeking admissions under reserved category such as SC/ST/BC etc., G.O. No. SWL 131-BOA-79 Bangalore dated 27th June, 1979 as amended upto date are required to support their claim with relevent documents.
5. Last date of issuing application form is **26th April 1984.**

By Order
REGISTRAR

Smt. Radha Burnier addresses convocation of Nagarjuna University

Given below is the test of the Convocation Address delivered by Smt. Radha Burnier, President, International Theosphical Society, at the Nagarjuna University, Guntur on 31st January, 1984.

Convocation

"The Nagarjuna University is named after one of the most brilliant men who ever lived, one whose depth of thought, clarity of perception and spiritual power was such that even after centuries he is a fount of inspiration to a vast number of people in many lands. This University is fortunate to be situated on the very soil where he was born and lived, a soil made sacred by the aspiration for light of all those who received new insights and understanding from him. It is to be hoped that within the bosom of this University many students will find in the years to come such stimulation and inspiration that our country and the world will be benfited by others who rise to the sparkling stature of Nagarjuna.

"Today, our country and, in fact, the whole world, is facing critical challenges. There is the crisis created by sharp divisions between the North and the South, the East and the West, between people with differing ideologies and so forth. The growth of population in a number of countries is another challenge of a serious nature to the entire world. Man's inability to cope with the conditions created by his own technological knowhow is pathetic to behold. He has been urbanizing the earth, putting himself out of touch with nature, and he has created for himself a sense of isolation and barrenness which he cannot overcome.

"It would be possible, if time permitted, to give a detailed account of how complicated man's life has become—so complicated that problems are not easy to solve. Even experts find it difficult to forecast events because of the complexities of the present day in the economic and other fields. The pressures which arise in modern society make man sick, physically and mentally, in spite of all the advantages that science and technology have conferred upon him. As most of us know, stress is a peculiar modern ailment with many side-effects in the physiological as well as mental fields.

"Although the outer forms of the challenge are readily perceived, it is not so easy to identifiy the essential elements of the situation and to find the right means to transcened the problems. This involves searching for the roots and not being satisfied with analysing what exists on the periphery. The ability to penetrate to fundamentals and view problems in their totality and not in piecemeal fashion is a test for the educated and cultivated mind.

"Unfortunately our concept of education has deteriorated because of the struggle for success. Education has become synonvmous with qualifying for employment and competing for material gain. This type of education has little to do with cultivating excellence of the mind, and much less to do with the unfoldment of the faculty of sensitive perception and penetration into the depths, along with which goodness and a sense of harmony in relationship take birth. Every human being has within him not only the seeds which can grow into a state of mental excellence, but also other seeds. Sensitivity to beauty, an aspiration and response to truth, uprightness and goodness, can all flower when there is the right sort of cultivation. This must be an essential part of the educational process.

"Alas, for most people even the partial self-culture which takes place in school, college and university ends after stepping out of these institutions. The later life becomes a mechanical process. Marriage, children, earning a livelihood, the stress and strain of competition become the be-all and end-all of existence. Thereby, life loses its real meaning, for the whole of life, to be well lived, must be an educative adventure, the movement of the human being blossoming like a flower.

"Nagarjuna, the illustrious son of this soil, threw great light on what the unfoldment of the human being really signifies. He pointed out that intelligence of a high order is inseparable from disinterested love and the application of one's energies for the welfare of all, which the word 'love' in its best sense implies. It is towards that synthesis of mind and heart that culture and education must lead. The mere acquisition of knowledge, however exciting it is, and even the polishing of the mind, are sterile, if the underlying motivation is selfish. Such knowledge and capacity of the mind cannot build a good society in which individuals experience the freedom, peace and happiness for which everyone longs. Modern society offers irrefutable testimony of the failure of knowledge divorced from the sense of compassion, *karuna* which, as Nagarjuna taught, is an intrinsic aspect of intelligence. If there is widespread, degrading poverty in India and many other countries, it is not because of in-sufficiency of knowledge. The science and technology which have performed miracles can resolve the problem of poverty, if only mankind in general wanted to abolish it. But there are too many selfish interests at stake, including nationalistic interests. So, the problem remains unresolved, because of attitudes being what they are, to which vital fact almost no attention is given at all.

"King Midas celebrated in Greek mythology, is reputed to have turned whatever he touched into gold. This prevented him from eating of course! It is the confusion and self-interest embedded in the human mind which generate and give continuity to the chaos in human society. In the present day almost all of the world is under the tyranny of totalitarian regimes. This has happened because of the extremely chaotic conditions for which there seems to be no answer except the one offered by dictators, namely fear and obedience, the loss of human dignity and self-responsibility. Rather like King Midas, man turns everything into a state of disorder and suffering.

"It has become a habit for man to imagine that confusion and contradiction lie outside. For centuries he has indulged in tinkerings, revolutions and modifications. He has refused to go to the root of the question and see that within his own mind there is confusion and lack of balance. It is from this source that what is outside is constructed. If human society has been bedevilled by problems which have brought it to the breaking point, it is largely due to the immense stress which has been laid on onesided development. Such words as 'goodness', 'love' and 'compassion' have ceased to figure in the culture of the human being and in the process of education, whether that education takes place within an institution or outside.

"Boys and girls are growing up now with a sense of insecurity and powerlessness. The decay of values and loss of integrity is like an ocean which is ready to swallow them up. They are unaware that the breakdown of order is a symptom of self-centredness and selfishness. Being equipped mostly to scramble for and hold a job, the young men and women of our day become victims of the situation, incapable of stemming the tide or rising above the distressing trends. The future is their future. They have to live in it and they can give shape to it, instead of becomming victims by taking a radical look at the primary causes. From the cultural, moral and spiritual points of view, the future will be a bright one only when a sufficient number of individuals, particularly the younger generation, educate themselves into a state of wholesomeness.

Too often in this country there is dependence on those in power, the administrators and politicians. Obviously, if the future is left in the hands of the few, the present momentum and direction will not change, nor will tensions be reduced. On the other hand, if there is widening awareness among educated individuals of the nature of the human mind, its problems, potentialities and way to development, there can be a complete change in the very atmosphere and structure of society. As Andre Malraux said, the society that any group of men create depends on the concept they have of the human being. Those for whom the human being is a material body, create a materialistic, competitive society with all its ills. Those for whom man is an intellectual entity live in abstractions; they create a society in which no attention is given to ordinary practical things like order on the road or cleanliness on the street, because abstractions fill the mind. Only those who have an understanding of man as a being in whom there can be an integration, a wholeness, the equilibrium of mind and heart, can create a human society in which there is concord and also freedom. Therefore, it is very important for our young men and women to understand rightly what the human being is, what is a state of integration and wholesomeness.

"On every side we see a gulf which separates thought from action, word from deed. The leaders of nations speak every day of peace, while they are busily engaged in promoting the arms-race and producing deadly weapons for mass annihilation. People in power continually make promises which are never meant to be kept. So do we, people who are not in power. How many in India make appointments which they do not keep. In other fields too, the discrepancy exists. Few philosophers so-called are able to face deprivation or death with serenity, as Socrates did, for philosophy is most often theoretical, a subject for lectures. Similarly in the field of religion there is enormous discrepancy. Every great religious teacher has taught of love and unity. Jesus Christ taught that greater love hath no man than this, that a man lay down his life for another. The Buddha said, hatred ceaseth not by hatred; hatred ceaseth by love. The Hindu teaching is that everything is a manifestation of a supreme reality, that all is Brahman. Yet, in the name of religion, every kind of atrocity has been committed and superstition perpetuated. In the name of religion, 'outcastes' and women have been despised and ill treated, 'holy' wars have been fought (as if slaughter can ever be holy), barbaric punishments are instituted and in a thousand other ways the principle of love and unity has been flouted. Even the scientist with his sharp mind is in a state of contradiction. His objectivity and rationality can be thrown to the winds in personal relationships; he is not incapable of denying or asserting things outside his field quite irrationally.

"In the private lives of all of us there is this chasm. We say one thing and do something else. We talk about high ideals and act against them. As Saint Paul said long ago. 'The good that I would, I do not; but the evil which I would not, that I do.' As in him, feebleness of resolution shows itself in everything we do.

"This dichotomy of the mind is the source of confusion and the breeding ground of mischief. It undermines the integrity of both society and the individual. In India we talk of our heritage, but we are destroying it. Our religion and philosophy have become empty, without a vital, transforming power. We want our economy to improve so that we may benefit from it, but we do not want to work and produce. We want to earn titles, but do little to deserve them. We would like clean streets, but we throw rubbish everywhere.

"In most of the ancient schools of religion and philosophy, there was a yoga which made the bridge, and prevented religion and philosophy from being theoretical and sterile. Yoga was the means to translate thought into action. It made the conceptual into the actual. It demands of each one that he himself should do what is necessary, not waiting for others to start. One is not absolved of the responsibility for inaction or wrong action on the ground that all the world acts irresponsibly. Yoga is total self-responsibility. Being total, whole-hearted, it has the power to bring about a change in oneself and also to radiate the effects of that change towards others. Our national life calls for a yoga in this sense, a discipline for establishing integrity, confidence in each other and a spirit of cooperation.

"Both integrity and cooperation are essential elements of culture. Decay of culture shows itself in many ways. Today, one facet of that decay is exhibited in the inability to work together for the common welfare, irrespective of differences of language, geographical origin, community and so forth. Because lip-service has replaced reality to such an extent, we have forgotten that every-day conduct, the way in which we speak to another or think about him, our modesty or otherwise, have a great deal to do with being alive culturally and spiritually. A spiritual man is not one who wears a particular kind of garment. A man does not become cultured because he has a degree or a little intellectual cleverness. Culture shows itself in a spirit of benevolence of which cooperation is a spontaneous manifestation. How vastly different would this country be if the people of different castes, regions, etc., cooperated with each other, if citizens helped administrators by their behaviour and respect for order, and if the rich cooperated with the poor, and the educated set the example for social upliftment and cultural regeneration.

"Many have bewailed the loss of leadership in our country. Who can offer leadership except the educated and cultured? The extraordinary apathy of the intellectual class is due to compartmentalization of intellectual activity and those qualities of character which are the essence of culture. Energy spurts forth every now and again for destructive purpose and for pulling apart whatever thing exists in a somewhat integrated condition. There is no patriotism in violence, demonstrations and organizing for personal or groupist aims. Real love of the country manifests itself in enhancing its culture one's personal life and through cooperation for constructive purposes.

"The meaning of leadership has to be rethought. Perhaps this is not the time for just a few men to take over the reins of leadership into a new era. This may be the time for less charismatic, more solid leadership, which a new educated generation can offer because of its enquiry into the nature of cultre and its appreciation of the ethical values which make up the fabric of culture. Very often culture is equated with art, but art is only one of the expressions of culture. In India of old it was said that art of high quality was possible only for those who brought order into their own lives, because creativity depends on that integrity and inner discipline which we have spoken about. What we need now is not so much promotion of the arts, literature and so forth, but renewed attention to practising the art of life which made the cultural history of India a glorious one.

"I trust that these thoughts which I have placed before you for consideration will be of some use in enquiring into that most important question of all questions: where does our progress lie, both individually and socially? What the individual thinks and does matters very much to the nation as a whole and what happens in society affects all of us. We cannot hope to lead purely personal lives apart from society and hope for the best. That would be ostrich-like folly. Duty lies clearly before us to exert all our energy, use our power of enquiry, sit together and discuss in a cooperative spirit where the good of *all* of us lies. How can human beings, you and I, those whom we see around us and those whom we do not see, *all* make progress outwardly as well as inwardly, intellectually, culturally and spiritually?

"Individual progress, individual salvation may have no meaning, because individuality is a notion, a fiction of the mind. This was the teaching of the Buddha and his great disciple Nagarjuna. Perhaps, progress, the Good, can come only for all of us together. Towards this end we must begin an enquiry and resolve upon action accordingly." □

A REPORT

Poona University's National Space Science Symposium—1983

The National Space Science Symposium was organised during December 7-10, 1983 in the Poona University under the joint recommendation of ADCOS and INCOSPAR. In addition to ISRO and Poona University, the symposium was co-sponsored by the UGC, DOEn, INSA, IMD, CSIR, DAE and IITM. This prestigious symposium held biennially, serves as the common forum for planners, experts and researchers in all space sciences and related disciplines to exchange recent results and to discuss and plan future research activity in the country. The symposium was spread over three and a half days and covered the entire spectrum of topics related to space sciences in India, such as, Aeronomy, Space Meteorology, Atmospheric Environment, Climatology, Astronomy and Astrophysics, Science of Remote Sensing, Cosmic Evolution and Origin of Life.

In the inaugural function, presided over by Professor R.R. Daniel, Chairman ADCOS, Professor S.P. Pandya, Director PRL, released the souvenir brought out by the Physics Department of the Poona University. The souvenir contains information about the research activity of the Physics Department in Space Physics and other areas. It also contains information on the research activity in Space Physics being carried out by other University Departments. In the inaugural address, Professor Ram Takwale, Vice-Chancellor of Poona University, remarked that in the next decade major scientific research effort may get concentrated in the areas of Space Physics, Electronics and Energy Resources.

The programme of the symposium comprised invited review talks in the plenary, as well as in the parallel subject sessions; contributed presentations and panel discussions. Nearly 400 scientists from Institutions and Universities throughout the country attended the symposium. There were about 300 contributed papers, out of which more than 100 were presented in poster sessions and the rest were presented in oral sessions. To accommodate this large number of presentations upto five parallel sessions were arranged on some days. A rapporteur session on Atmospheric Sciences held on the last day acquainted participants about the highlights of discussions which took place in different parallel sessions. In addition to these programmes during the day, scientific discussion meetings were arranged by different groups in the evenings. An evening lecture on 'Proton Decay' was given by Professor B.V. Sreekanthan, Director, TIFR, on the first day of the symposium.

In the National Space Science Symposium, poster session has been introduced recently. It is observed that many participants are rather new to the poster medium of presentation. With a view to improving the general standard of poster display during the symposium, the Local Organizing Committee had circulated before the symposium a few guidelines with illustrations. Since poster display relies basically on imaginative display of scientific information, prizes were kept for best poster presentation in different subjects. Reviewing Committees were set up for each subject who examined the posters and made recommendations. In the Concluding Session on the final day of the symposium prizes were given away by Professor B.V. Ramana Murthy, Director IITM. Titles of the prize-winning papers with authors are given below :

(1) Solar wind-Venus interaction affecting ionospheric morphology, by R.N. Singh and R. Prasad, B.H.U. (2) Wind shear studies through forward scattering Sodar, by S.P. Singal, B.S. Gera and S.K. Aggarwal, NPL, New Delhi. (3) Spectral reflectance analysis of Geological materials in costal environments of Kerala and Goa, by N.K. Agarwal, M.M. Nair and P.N. Rao, G.S.I., Hyderabad. (4) Experimental study of laboratory generated liquid aerosols, by V.V. Agashe, M.P. Argade, R.B. Patil and H.C. Patni, Poona University.

On two nights during the symposium, there was Astronomy activity on the terrace of the Physics Department building. Dr. M.K. Tiwari, Secretary ADCOS and Convener NSSS-1983, was busy in 'Star Gazing' in the company of enthusiastic participants. The telescope was a prototype model of 3″ refractor telescope approved by an expert's committee of ADCOS. ADCOS has taken up a programme of indigenous production of a large number of moderately priced, suitable, small telescopes with the object of spreading the study of Astronomy in India. The prototype model was displayed to the participants during the symposium. A brief note giving the background of the ADCOS efforts was also circulated to all the participants. A few industrial concerns engaged in manufacturing space science related products also exhibited their equipments during the symposium.

The symposium brought together a large number of space physicists, engineers and research students and engaged them in fruitful discussions on emerging trends in space research. Scientific discussion meetings organised in the evenings enabled discerning participants to know the direction of emerging national policy in space research. □

Arunachal University established

The Legislative Assembly of Arunachal Pradesh passed on February 3, 1984 "The Arunachal University Bill, 1984".

On February 5, 1984, the Prime Minister of India, Smt. Indira Gandhi, laid the foundation stone of the Arunachal Pradesh's first university at Doimukh near Itanagar. In her speech, the Prime Minister said that the Arunachal University would solve a long felt need of the students of Arunachal Pradesh. She urged the university to inculcate a spirit of enquiry in keeping with the changing world and help in drawing out the best talents. She also appealed to the people to strengthen peace and work hard for the integrity of the country.

Osmania planning for a university development fund

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, said the university was planning to institute a University Development Fund to meet the needs of various teaching departments. He said donations received from the alumni of the University and other philanthropists would form the fund. He was referring to strengthening of Library and Information Science Department of the University at its silver jubilee inaugural function held recently.

Prof. T. Navaneeth Rao, Rector, who presided said information science had been growing at a very high speed and was becoming important for every discipline. He said university administration was thinking seriously about raising more funds for development activities

Mr. N.B. Inamdar, University Librarian, who spoke about the programmes chalked out in connection with the Silver Jubilee, said an International Seminar, Short-Term Inservice-Courses, Alumni Directory will be some of them. He said the society for information science has requested the department to conduct a course for R and D industry librarians,

Energy Centre Inaugurated by Shri K.C. Pant at Roorkee University

Shri K.C. Pant, Chairman, Advisory Board on Energy, Govt. of India inaugurated Alternate Hydro Energy Centre at the University of Roorkee on 29th Jan. 1984 and visited its various R & D activities. In his inaugural address he started with the remarks 'It is only appropriate that this University with its long and pioneering tradition of excellence in the engineering sciences and technology has taken up the responsibility for promoting the development of small hydro electric schemes in the country in a systematic fashion".

He further asserted "I do believe that there is substantial scope for development of small hydro electric projects which must be carried out in parallel with the development of other hydro electric resources."

During the inaugural address he urged "I would also urge greater attention be devoted to low head (that is heads less than 3 m) schemes. Under the prevailing circumstances in India, economically viable independent small hydro-electric schemes, where a stream flow is captured, regulated and developed for production of power without any other purpose being considered as a primary objective, have to be in the high head or medium head range and are in practice found mostly in the medium head category. These situations occur almost exclusively in hilly areas. Independent small hydro electric schemes in the low head category have yet to be found to be economically attractive. However, this is one area where with intensive R & D of the type proposed by this University, it should be possible to expect a breakthrough in the next couple of years'.

He concluded with the remarks 'To me the greatest attraction of decentralised energy system like small hydro schemes lies in the potential it offers for involving local communities in the conception, implementation and management of projects. This is one small step in building self-reliance at the local level. The Advisory Board on Energy has begun to examine the entire question of hydel development in general and small hydel electric schemes in particular. Prof. Thapar was present at one of these

ENERGY CENTRE

Shri K.C. Pant, Chairman, Advisory Board on Energy, inaugurating the Alternate Hydro Energy Centre at the Roorkee University.

meetings recently and we benefitted from the insights he provided. We are always open to suggestions and ideas. I wish the Alternate Hydel Energy Centre all success and I look forward to a fruitful period of collaboration".

Dr. Bharat Singh, Vice-Chancellor presided over the function and introduced the Chief Guest.

Prof. O.D. Thapar in his introduction outlined objectives, present activities and future plans of the Centre. He outlined the important role of the Centre in the development of Integrated Decentralised micro hydel system for rural energy needs.

Bombay University's seminar on legal research & methodology

Under the joint auspices of the Department of Law, University of Bombay and the Indian Council for Social Science Research (western regional centre), a seminar was held on Legal Research and Methodology on Saturday, 21 January 1984. The seminar was inaugurated by the Pro-Vice-Chancellor, Principal M.D. Limaye, who pointed out that Laws are complex and diverse and have relevance to social sciences. He therefore emphasised upon an inter-disciplinary approach and the need for making Laws simple for the understanding of common man. Dr. T.K. Tope, Ex-Vice Chancellor of Bombay University presided over the inaugural function. In his presidential address he pointed out that research is required to be done for doctrinal as well non-doctrinal purposes and now-a-days research is an integral part of successful preparation of briefs by lawyers and writing of judgements by judges. Further, research and teaching always go together and research for Ph.D. for advancement of knowledge must always be encouraged by the universities. Dr. S D. Karnik, Director of the ICSSR Western Regional Centre, informed the gathering about the role of ICSSR in encouraging research programmes in social sciences including Law. Dr (Mrs) Narmada Khodie, Head of the Department of Law and Director of the seminar pointed out that new jurisprudence was emerging since the introduction of the Constitution and there is tremendous scope for doing research to identify the factors which nourish and build up new Laws and new jurisprudence.

The seminar was attended by sixty presons consisting of Principals of Law Colleges, Professors of Law, Ph.D. scholars and senior students of the Department besides the special invitees.

Bureau for scientific information planned

At the first meeting of the National Council for Science and Technology Communication held at New Delhi recently the Minister for Science and Technology, Mr. Shivraj patil revealed that the Government of India was proposing to set up a National Science and Technology Information Bureau. The Bureau would collect, translate and disseminate all scientific information to the people in a simple and lucid manner.

Prof. M.G.K. Menon, Vice-Chairman of the Council said that the proposed bureau should have aceess to scientific information wherever it was available so that it could effectively serve as a central centre for dissemination of scientific information.

A media centre for software development and a data base with an inventory of scientific communicators in all languages was also suggested.

The National Council for Science and Technology Communication was set up some time ago as a nodal agency for guiding, coordinating and orchestrating activities of the media for popularising science and technology. The Council is also expected to monitor and evaluate the entire programme and its impact on the national scene.

Computer based education to be introduced in India

Under an agreement signed for Indo-British cooperation in the field of micro computers, India will soon introduce for the first time computer-based education. To begin with 250 institutions would be chosen for this purpose. Mrs. Sheila Kaul, Union Minister of State for Education along with Dr. Ashoka Chandra of the Department of Electronics and Prof. H.W. Mahabala of the IIT, Madras have left for U.K. to understand at first hand the British programme of computer education in schools.

The British Government will provide training facilities as part of the gift of computers including a small team of educational computing experts to train Indian teachers and other personnel in the use of the gift machine.

The British Government is also expected to provide films, audio-visual software, printed and other material relevant to the Indian programme.

By the end of 1984 every primary school in Britain is expected to have a micro computer.

Three dimensional TV

Two scientists from the IIT, Madras and one from the Anna University at Madras claim to have perfected a system of converting presently available domestic TV sets into one for viewing pictures with a three dimensional effect. The cost of conversion has not been worked out by them but according to one of them it is feasible to manufacture such TV sets on a commercial basis.

The principle of stereoscopic vision has been used and procedures have been worked out for viewing depth in addition to the length and breadth of an object on the TV screen. At the transmission stage instead of one camera, which is currently used in the studios, two would be required. The TV receiver will have two beams of electrons to illuminate the TV screen. The modifications required in the receiver are an additional electronic circuitry for digitising the images and storing them in memory, digital analogue-converters and switches.

BITS's 2nd All India university youth academic week

The Birla Institute of Technology and Science have announced organisation of the Second All-India University Youth Academic Week from 13 to 15 April, 1984. It would be an academic get-together of university youth providing an opportunity for them to present their professional work achievements. The other objectives with which the academic week is being organised includes training of students in the principles of scientific thinking, techniques of analysis and vigour of scientific articulation, both written as well as oral, documentation of students' professional work achievements and to instill amongst the university youth love for the vigour and discipline of the academic culture.

The academic week will also consist of a series of invited lectures to be delivered by scientists, engineers, science writers, academicians and professional experts.

Papers have already been invited nation-wide from final year university students pursuing bachelor's degree in engineering or master's degree in science and humanities. The areas of interest for papers are : Production & Manufacturing Systems; Engineering Design & Development; Instrumentation Systems; Microprocessor Systems; Systems Engineering; Computer Systems; Project Management; Research Projects; Management Science based Systems; Environmental Systems; Economic Systems; Operations Research & Statistics; Integrated Rural Development; Science Communication & Journalism; Education Research; Science & Society.

There would be invited lectures by leading exponents of the professional world, exhibitions, video films, documentaries, etc. on the latest development in science, technology, a book exhibition and a campus interview for students in engineering, science, technology, economics, management and such other fields.

Prizes are proposed to be awarded for the best papers.

APOGEE-83 (acronym for "A Profession-Oriented Gathering Over Educational Experiences") was organised last year. This is the second one which is being planned.

Gandhian studies foundation set up in London

Mr. John Linton a B.B.C. Programme Organiser and leader of the Quaker movement after visiting the Peace Research Centre of the Gujarat Vidyapith addressed a student-teacher congregation where he revealed, that a new world-interest in Gandhian Studies had led to the setting up of a Gandhian Studies Foundation in London. He commended the integration of Gandhian community life-community prayers and mass-spinning, community service, productive work, equality of all religions, etc. in the higher education system and pleaded that time had come when everyone should belong to one religion of service to Mankind instead of different denominations. Gandhian ideas provided a great hope for mankind, he said.

The Vice-Chancellor Prof. Ramlal Parikh welcomed the guest and stated that the Gujarat Vidyapith had almost a National Resource Centre on Gandhian Studies and Peace Studies with facilities for correspondence course on Gandhian Thought at M.A. level and full-time research course at M.Phil and Ph.D. level. M.Phil course on "Peace & New Global Society" is also going on. Prof. Parikh also said that the U.N. Peace University at Costa Rica had formally recognised Gujarat Vidyapith as its collaborative organisation for conduct of research and training in Peace Education. The Gujarat Vidyapith is also preparing a three-volume Encyclopaedia of Non-violence. Shri Jamnalal Bajaj Institute of Studies in Non-violence has also been established

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Correspondence Course in Evaluation Methodology & Examinations

(Basic, Intermediate and Advanced Level)

Applications are invited from College/University teachers for admission to Correspondence Course in Evaluation Methodology and Examinations conducted and co-ordinated by the Research Cell, Association of Indian Universities. There are three separate courses, one each at Basic Level, Intermediate Level and Advanced Level (Special Professional Course). The duration of each of the three courses is six months (April 1st, 1984 to September 30th, 1984). However, the Basic Level Course is offered from Regional Centres like Delhi, Bombay, and Madras. A personal 'Contact Programme' for three days is planned for each of the three courses. A set of prescribed books will be supplied to every candidate free of cost.

Requests for prospectus and application forms accompanied by a crossed Indian Postal Order for Rs. 5/- drawn in favour of the Secretary, Association of Indian Universities and a self addressed stamped envelope (Re. 1/-) should reach the undersigned. The last date for the receipt of application in the prescribed form is **15th March 1984** for non-sponsored candidates and **30th March, 1984** for sponsored candidates. For sponsored candidates, University/Institution can pay the course fee and travel expenses for contact programmes out of unassigned grants provided by University Grants Commission.

Project Director (Examinations)
Research Cell,
Association of Indian Universities,
6, DDA Building, Nehru Place,
New Delhi-110019.

for advanced research in this area.

Prof. D. N. Pathak, Visiting Professor to the Peace Research Centre, thanked Mr. Linton.

National seminar on industrial sickness

A two-day National Seminar on 'Industrial Sickness' was held at Cochin University on January 7-8, 1984. The 300 delegates who came from various parts of India included industrialists, bankers, academicians, planners, administrators, management experts, politicians and labour leaders.

Shri K. Karunakaran, Chief Minister, Kerala, inaugurating the seminar, stated that the State Government would be willing to examine a proposal to set up a separate agency to examine the problems of industrial sickness on a unit by unit basis and to rehabilitate the worthy ones.

The discussions at the seminar centered on the 'cost of industrial sickness', 'causes of industrial sickness' and 'prevention and cure of industrial sickness'.

Memorial lecture at Punjabi Varsity

"Reliance upon other countries in the field of space sciences should be minimised" remarked Dr. P.S. Gill, an eminent scientist while delivering Dr Homi Jahangir Bhabha memorial lecture at the Science auditorium of Punjabi University organised to mark the death anniversary of Dr. Bhabha on January 24.

Universities, he said, should step in to put their share in the conduct of research by the Indian scientists. He pointed towards the changes taking place in the technology in production of Bio-chips. The three dimensional silicon chips, he said, have billion times more memories than the ordinary two dimensional chips and consists of resistances, capacities, inductions, that go in the making of electronic circuits.

Detailing the scientific achievements of Dr Bhabha, Dr Gill said that it was Dr Bhabha who first suggested that the conventional methods of electricity will have to be modernised to meet the demands of the country.

Punjabi University news bulletin

Dr S.S. Johl, Vice-Chancellor of Punjabi University, Patiala released the first copy of an eight-page bi-lingual monthly 'Punjabi University News" bulletin brought out by the Public Relations Department of the University in English and Punjabi, at the Senate Hall of the University on January 25.

Releasing the first issue of the Punjabi University News bulletin on the eve of the Republic Day, the Vice-Chancellor remarked that academic and investigative information will go a long way in providing solace to those scholars who are engaged in various research and investigative studies.

Centre for information science at Cochin Varsity

The Government of India has cleared the establishment of a Centre for Information Science at Cochin University and released the first instalment of Rs. 15 lakhs as special assistance for the purpose. The Centre, which will function under the University's Department of Electronics, will create further infrastructure for training and research in the new emerging area of information science. The basic intent of the Centre is to prepare systems analysts, systems designers, application programmers, data base administrators, information-retrieval specialists and communication system specialists. The research projects in the area of information science will not only put the academic activities of the University at a high level, but also lend themselves towards a more meaningful interaction with industrial establishments and other R&D organisations.

Meanwhile, the University Grants Commission has approved introduction of an M. Tech. programme in Computer and Information Sciences in the University. This programme will be funded by the University Grants Commission and the Department of Electronics, Government of India.

Osmania Institute in Microbiology

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, outlining the important role played by the life sciences in the last fifty years, said research findings had changed the life for better by preventing diseases and offering better medicines. He recently inaugurated a short-term Institute in Microbiology sponsored by UGC at the Microbiology Department, Osmania University.

Prof. H. Polasa, Director of the Institute, in his address said there was a dearth of qualified teachers in Microbiology and the three-week institute was aimed to help them. He said, out of the 25 participants, 20 came from other States. There was a need for upgrading the Department as a National Centre.

Prof. T. Navaneeth Rao, Rector of the University, who presided, said that the Microbiology Department had grown well and the UGC sponsored Institute was a proof of it. He hoped that in the next few years, it will be recognised as an advanced centre in Microbiology.

Inter-collegiate literary and cultural competitions

The University of Mysore arranged the Inter-Collegiate Literary and Cultural Competitions for the students of affiliated Colleges and postgraduate Centres in Debate in Kannada and English, Elocution in Kannada, Quiz in English, Spot Painting, Photography and Cultural items like Vocal Music, Instrumental Music, Kannada Lyrics, Kannada Folk Song, Film Hits, Classical Dance, Mono-Acting and Group items like Group Singing, Group Dance etc. were arranged. More than 200 students from about 40 Colleges took part in various Competitions organised from 23rd to 26th January, 1984 by the office of the Dean of Students' Welfare.

Three prizes in each of the items were given and on the final day the prize winners presented their items at the Open Air Theatre, Manasagangotri, Mysore. There was a big audience of about 5000. The final day programme coincided with the celebration of Republic Day where an attractive parade of NCC Cadets was arranged.

ICMR grant to GNDU teacher

The Indian Council of Medical Research has sanctioned a grant of Rs. 2 lacs to Dr. Jai Rup Singh, Reader in the Department of Biology of Guru Nanak Dev University for a research project on "Genetic Toxicological Studies on Hormonal Drugs." The project is expected to be completed in three years' time.

Dr. Jai Rup Singh was also granted a precision engineered research microscope with an automatic fully integrated 35mm Camera by the German Academic Exchange Service to facilitate his research work in the field of human genetics. The Microscope is considered among the best Microscopes of its type and the versatility of this Microscope permits its usage with microscopic techniques in Biology, Medicine and Physics.

Saurashtra University introduces new courses

The University has made provision for a Certificate course and a Diploma Course in photography. The certificate course in photography will be of one term duration after passing the S.S.C. examination. Provision has also been made for registering private students for this certificate examination. The Diploma Course in Photography is of one year's duration with two terms after passing the certificate examination in photography. There is no provision for students to appear at this diploma examination as private candidates. photography has also been introduced as one of the optional subjects in the faculty of Arts under the three-year degree course.

It has also been decided to include the degree of Master of Social Work (MSW) in the Statutes. Under the faculty of Arts, the diploma in public Relations and Diploma in Printing have also been added. Courses for Master of Social work Diploma in Public Relations & Diploma in Printing will be framed soon.

Seminar on centre-state relations

Under the auspices of the Gujarat Rajyashastra Mandal, the Nalini-Arvind And T.V.Patel Arts College, Vallabh Vidyanager hosted a seminar on Centre State Relations. The one-day seminar, held on January 22, 1984 marked the Silver Jubilee Celebrations of the host college. Many teachers of political Science from all over Gujarat took part, under the presidentship of Dr. Ghanshyam Shah, Research Director, Centre for Social Studies, Surat and Prof. Devvrat Pathak, Director, Centre for Peace, Gujarat Vidyapith. The seminar mainly felt that there was a need for a constitutional change in the office of the Governor and for voice of the states in the centre. The Seminar further felt that controlled means of communications party politics should be subordinated to national interest and expansion of federal tendencies to all the levels of administration.

Tanzania seeks aid from India for technical education

The visiting Tanzanian Minister for National Education, Mr. Jackson M.Makwetta, conveyed a request to the Union Minister for Education, Smt. Sheila Kaul, for India's assistance in improving Tanzania's education system particularly technical education. Mr. Makwetta pointed out that out of 7 lakhs students enrolled in the primary schools, only 600 left the school system to enter the university.

India has agreed to help Tanzania in opening five technical secondary schools and one technical college. Mr. Makwetta has requested that India may also provide equipment and undertake training of the staff in India for the technical institutions.

Student travel grants

The India Foundation, 595, Budhwar Peth, Sakal Building, Pune, is offering interest free loans upto a maximum or Rs. 6,500 to Indian students going abroad for higher studies in August/September, 1984.

The applicants must have secured admission in a foreign university for a one-year course beginning September, 1984. Such students must have also secured an assistantship or scholarship. The travel loan is to be repaid within two years.

Application forms may be obtained from the Executive Secretary of the Foundation before May 15, 1984 and submitted before 31st May, 1984.

Rural University planned for Rae Bareli

At a meeting of the Board of Management of the Feroze Gandhi Postgraduate College, Rae Bareli, it was announced recently that the college would be converted into a Rural University. Such conversion into a Rural University would fulfil the wishes of late Feroze Gandhi who was the founder President of the College it was stated.

Necessary action to get the proposal cleared by the University Grants Commission and the State Government have already been initiated, according to reports

Tamilnadu plans expansion in technical education during Seventh Plan

According to reports received, during Seventh Five Year Plan, Tamilnadu will be establishing five engineering colleges and about 50 polytechnics.

At present the 14 engineering colleges in Tamilnadu can accommodate about 2,000 students. The number of applications for the 2,000 seats during the last year was 13,000.

The new Engineering colleges are likely to be set up by private agencies for which Government may accord necessary permission.

Osmania organises college principals' conference for NSS activities

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, stressed the need for shaping the character of the students. He said in the last two decades because of lack of proper training, indiscipline had increased. He hoped that NSS was one of the ways to train them to shoulder the future responsibilities as good citizens. The Vice-Chancellor was inaugurating recently College Principals' Conference on General NSS activities organised by Osmania University NSS Unit.

He said the NSS camps gave an exposure to the students on problems of the rural people and urban poor, but he said the spirit of service should continue all through. He said the students should be made to do sustained good work and influence others. He suggested that the NSS students should take up cleaning the campus and wiping off the slogans written on college walls and restore the beauty of buildings.

Prof P.S. Ramachandran, Registrar of the University, who presided, said the Osmania was one of the first Universities to start NSS Programmes.

Mr. A. M. Govardhan, NSS Programme Coordinator, said the Conference would discuss measures to strengthen the regular NSS activities.

Karnatak Varsities Amendment Bill

The State Assembly of Karnataka recently passed the Karnataka Universities (Amendment) Bill, 1984. The Bill provides for the establishment of Planning Boards to advise on development of universities. The legislation, it is stated, is in accordance with a rule of the University Grants Commission.

New diploma courses in Patna University

The Vice-Chancellor of Patna University, Dr. G.P. Sinha, recently announced that two new diploma courses in the Faculty of Social Sciences of the university would be started from the next academic session. One will be a diploma course in rural welfare and the other will be a diploma course in safety management. Both the courses would be started under the auspices of the Labour and Social Welfare Department of the university. The courses are of one-year duration.

He also reported that the University Grants Commission had already sanctioned starting of a one-year degree course in Journalism. State Government's sanction however for starting this course during the Sixth Plan period is still awaited, it is reported.

Merit promotion scheme in GNDU

Guru Nanak Dev University has implemented the Merit Promotion Scheme for University Teachers as suggested by the University Grants Commission.

Under the scheme, the University has already promoted all eligible teachers.

TheExecutive of the Teachers' Association also fully supported the Vice-Chancellor for the implementation of Rotation of Headship Scheme from April 1, 1984.

Women's University for Tamilnadu

The Government of Tamilnadu recently issued an Ordinance for the establishment of a Women's University at Kodaikanal in Madurai district. This university would be a unitary residential type "with emphasis on research, consultancy and monetary service involving women's welfare".

Computer centre in Patna University

According to Dr. G.P. Sinha, Vice-Chancellor of Patna University, the State Government has sanctioned a sum of Rs. 11.25 lakhs as its share for the construction of a computer centre in the Bihar College of Engineering. The total cost of the centre is likely to be Rs. 35 lakh. The University Grants Commission is expected to meet the rest of the expenditure for this project.

News from Agril. Varsities

Soil test facilities for micro-nutrient deficiency needed

Soil experts of the Punjab Agricultural University feel concerned about the increasing deficiency of micro-nutrients in the soils of the Punjab. Apart from manganese the Punjab soils also suffer from the deficiency of other micro-nutrients like zinc, iron and sulphur which badly affect the yield of wheat, maize, rice, potato, groundnut, raya etc.

Dr P.N. Takkar, Senior Soil Scientist (Micro-Nutrients) of the PAU has said that on account of manganese deficiency the wheat crop this year has developed interveinal chlorosis on the middle leaves with light greyish-yellow to pinkish-brown coloured specks of variable size confined largely to two-third lower portion of the leaves.

Though the University has adequate facilities for testing soil samples to detect the deficiency of nitrogen, phosphorus and potassium, facilities for detecting micro-nutrient deficiencies do not exist. At present deficiencies of micronutrients are determined from the crop symptoms only. Purchase of Sophisticated equipment and the recruitment of additional staff to provide necessary micro-nutrient soil test service to the farmers of the State was therefore important, it is felt.

New technique to save crops from white rust

The scientits of Haryana Agricultural University have suggested new techniques to have the rape seed and mustard from white rust. According to the scientists this disease had just started appearing in the state and if timely control measures were adopted by the farmers it could be checked considerably.

The disease can be recognised by appearance of blisters on all plant parts except the roots. The pustules are raised, shiny white area, variable in size and shape. Several of them appear in close proximity and many ultimately merge to form larger blisters. The host epidermis ruptures after formation of the pustules releasing white powdery mass. The crop particularly suffers heavy damage due to distortion of floral organs. Moist cool weather favours the disease.

To prevent the further spread of disease the scientists have suggested spraying of crop with Dithane M-45 or Manzeb of Difolatan with 1.5 kg/625 litres water/ha and repeating the sprays as per need after every 15 days. These fungicides may be combined with commonly recommended insecticides for aphid control.

Foreign delegation at HAU

A group of 15 academics from Colorado State University, USA led by Dr. R. Zimdahal, Director of International Education, visited Haryana Agricultural University recently. Dr. Zimdahal lauded the role of the College of Home Science as a useful bridge between the rural women and new technologies which can be adopted in day-to-day life. The academicians had also a detailed discussion with the various Deans and the Director of Research, Dr. R.P.S. Tyagi. The team was particularly impressed by the efficient transfer of technology through the various extension agencies.

The team also visited some of the villages of Hissar district adopted by HAU under Lab to Land Programme. The team was on a six-week visit to India to study project entitled Indian Agricultural Development: National, Social and Ethnical Aspects.

We Congratulate....

1. Prof. (Mrs) K. Vasanthi Devi, the first Vice-Chancellor of the new Women's University at Kodaikanal, Tamilnadu. Mrs. Vasanthi Devi was Principal of the Ethiraj College for Women, Madras.
2. Dr. D. Shankar Narayan, Additional Secretary, University Grants Commission, who has taken over as Vice-Chancellor of Bangalore University on 20th February, 1984 for a term of three years.
3. Dr Vishwanath Prasad, who has been appointed as Vice-Chanceller of Ranchi University.
4. Dr J. C. Bakshi who has taken over as Vice-Chancellor of Rajendra Agricultural University, Pusa.

News from Abroad

Pakistan plans to replace student unions with student councils

According to reports, Pakistan plans to replace student unions with student councils in order to divorce the unions from political parties. Those connected with student unions are likely to be barred from the proposed councils. Further, only bright students who are not engaged in violent or immoral activities would be allowed to participate in the councils. "The main object is to eliminate the element of political confrontation which had crept into the education system" it is stated.

Chinese-English dictionary

Scholars from America and China are likely to collaborate to produce a Chinese-English Dictionary. The one available now was published in 1931. "A Dictionary of Contemporary Chinese" will take six years to produce and may cost approximately $ 2 million. This was announced by Mr. Teng Shon-Hsin, Chairman of the Asian Language Department in the University of Massachusetts.

Classified Advertisements

RANI DURGAVATI VISHWA-VIDYALAYA
JABALPUR
Advertisement

Applications are invited on the prescribed application forms for one permanent post of Reader in the Department of Journalism & Mass Communication on or before **30th March, 1984.**

The minimum essential qualifications and scale of pay for this post are exactly those that are prescribed by the University Grants Commission. The prescribed application forms (in 8 copies) together with the details may be obtained by sending a postal order of Rs. 5/- in the name of the undersigned. The candidates who desire to get the application forms by Registered post should send an additional amount of Rs. 5/- by Postal Order for postal expenses. It should be clearly mentioned on the envelop in bold letters the name of the post applied for.

The University reserves the right not to fill up the post.

R.N. Tripathi
REGISTRAR

UNIVERSITY OF DELHI
Delhi-110007
ADDENDA

Ref. Advertisement for the post of Professors in Zoology (Vide Advertisement No. Estab. IV/85/84 dated 19-1-1984).

"Candidates with specialization in CELL BIOLOGY or ENTOMOLOGY may also apply."

Madan Mohan
REGISTRAR

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

BIOLOGICAL SCIENCES

Microbiology

1. Bhatt, B.R. *Microbiological aspects of marine organisms.* Saur U, Rajkot.

2. Bhowmik, Subrata. *Studies on interaction of selected pesticides with soil microorganisms.* IARI, Delhi.

3. Tewari, Rupinder. *Studies on staphylococcal enzymes with particular reference to coagulase.* Pb U, Chandigarh.

4. Tuladhar, Kayo Devi Yami. *Interactions of soil microorganisms with Rhizobium.* IARI, Delhi.

5. Usha Kiran. *Microflora associated with the agricultural commodities acting as allergens.* PAU, Ludhiana.

Biochemistry

1. Datta, Rita. *Nucleic acid metabolism in germinating seeds.* U Calcutta.

2. Mohan, S. *Studies on glycoproteins: Interaction between a sialic acid binding lectin and sialoglycoconjugates.* U Calcutta.

3. Nanawati, G.C. *Lipid metabolism in the developing seeds of* **Sesamum indicum** *L.* MSV, Udaipur.

Botany

1. Agrawal, Natwar Kumar. *Seed pathological studies on some* **Phaseolus** *species with special reference to* **P. vulgaris** *L.* U Raj, Jaipur.

2. Agarawal, R.D. *Studies on microbial deterioration of ginger rhizome during storage.* Agra U.

3. Anusuya, D. *Effect of fungicides and antibiotics on the microflora of groundnut,* **Arachis hypogaea** *L. with special reference to root nodule bacterium,* **Rhizobium** *sp.* Bangalore U.

4. Bahal, K.K. *Studies on the effect of growth promoting substances of algae on growth and yield of some oil bearing plants.* Kanpur U.

5. Berry, Meera. *Hormonal control of poly (A)-polymerase and monophenolase activities in plant cells.* U Delhi.

6. Bhattacharyya, Ananta Prasad. *Palynology of the lower Gondwana sedimentary deposits in Bankpura District of West Bengal, India.* U Burdwan.

7. Bhattacharya, Pradeepesh. *Mutagenesis and nitrogen fixation studies of salt tolerant blue green algae.* MSV, Udaipur.

8. Debata, Ashutosh. *Studies on leaf and panicle senescence in rice.* Utkal U Bhubaneswar.

9. Deo, P.P. *Studies on fungal spoilage of gram,* **Cicer arietinum** *L. seeds during storage.* Agra U.

10. Ghosh, Rama. *The role of hydrogen peroxide in the senescence process of excised leaves of some C_3 and C_4 species.* U Burdwan.

11. Goel, Reeta. *Studies on drug resistant strains of* **Escherichia coli** *isolated from gastroenteritis, urinary tract infections and septicaemic cases of human beings and domestic animals.* Kanpur U.

12. Goyal, S.C. *Physiological studies on some actinomycetes producing macrolide antibiotics.* Agra U.

13. Gupta, Madhu. *Chemosystematics of some species of genus* **Crotolaria** *L.* U Jammu.

14. Gupta, Savita. *Taxonomy, morphology and physiology of* **Pleurotus** *sp. at Lucknow.* Kanpur U.

15. Gupta, Suman. *Studies on some aspects of chemotherapy and immunology of experimental cestode infection.* Kanpur U.

16. Harbajan Singh. *Geobotanical studies on vegetation of Rajpura Dariba zinc bearing belt.* MSV, Udaipur.

17. Jacob, Zacharia. *Studies on some fungi of medicinal importance.* Kanpur U.

18. Kamlesh Kumar. *Genetic studies in dwarf sunflowers,* **Helianthus annuus** *L.* Kanpur U.

19. Kiran Prabha. *Studies on the sporophytic self-incompatibility in the Brassicaceae and the Convolvulaceae.* U Delhi.

20. Mamatha, P. *Cytochemical and physiological studies on the pollen and pollen tubes of* **Asclepias curassavica** *L.* Bangalore U.

21. Mathur, Gita. *Flower colour changes and pollination in* **Lantana camara**. U Delhi.

22. Mehrotra, Shanta. *Pharmacognostic study of some important medicinal plants used in indigenous system of medicine.* Kanpur U.

23. Menon, P. Usha. *Studies on the charcoal for diseases of soybean in relation to Rhizobium-Macrophomina interaction and cultural amendments.* U Calcutta.

24. Mishra, Ranganath. *Studies on the mutagenic potential of environmental contaminants: Cytogenetic toxicity of some dyes released with paper mill affluents.* Berhampur U.

25. Nath, Subhan Chandra. *Survey and screening of certain wild dicotyledonous plants of Sibsagar District (Western Part) Assam for fungitoxic properties.* Gauhati U.

26. Nazeer, M.A. *Cytogenetic studies in some ornamentals.* U Ker, Trivandrum.

27. Pal, Alpana. *Investigation on the potentialities of amylase syntheses by* **Polyporus osteriformis**. U Burdwan.

28. Palria, Sarveshwar. *Ecological studies of certain polluted rivers of Rajasthan with special reference to algae.* MSV, Udaipur.

29. Pandey, I.B. *A phytochemical study of medicinal angiosperms of Kanpur District and their improvement by cytogenetical methods.* Kanpur U.

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MINISTRY OF EDUCATION AND CULTURE

(DEPARTMENT OF EDUCATION)

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(2) **Lump sum on arrival** : 3,00,000 yen to assist with the the cost of accommodation, local travel expenses, etc.

(3) **Stipend for research** : A stipend for the purpose of payment for tuitions, expenses for research materials, board, lodging, transportation etc. The amount is set by the Foundation, and is limited to between 200,000 yen and 300,000 yen net monthly.

(4) **Insurance** : (i) Personal accident insurance with death benefit and medical treatment, and (ii) Sickness insurance with death benefit and medical treatment.

QUALIFICATIONS AND EXPERIENCE : A Doctoral degree equivalent to a Japanese Doctoral degree with 60% or above marks at Master's Degree level in subject concerned or related fields or 60% or above marks at Master's Degree level in subject concerned/related field and atleast two years' research experience as on **1-10-1984**.

AGE : Below 40 years as on 1-10-1984, relaxable upto two years for all Scheduled Caste/Scheduled Tribe candidates. The upper age limit and experience can be relaxed by not more than three months at the discretion of the Selection Committee in the case of specially qualified and brilliant candidates.

NOTE : (1) Where Grades are mentioned, the candidates must indicate the conversion formula adopted by the University/Institution. Equivalent foreign degree will also be considered.

(ii) Candidates, who have already been abroad for study/training specialisation either on the scholarship or on their own, are eligible to apply only if they have been in India for at least three consecutive years after their return from abroad.

(iii) The candidates should have adequate knowledge of Geographical situation and Cultural heritage of India, and of the donor country.

(iv) Employed persons must send their application through their employers with "NO OBJECTION CERTIFICATE" in time, failing which application shall not be considered.

(v) Candidates who do not possess the requisite qualifications need not apply.

(vi) Applications in subject field other than those specified above will not be considered.

(vii) Application should be accompanied by Postal Order of Rs. 5/- payable to Secretary, Ministry of Education and Culture, New Delhi (Rs. 1.25 Paise only in the case of Scheduled Caste/Scheduled Tribe and other backward class candidates), and attested copies of date of birth certificate, degrees, mark sheets etc. Applications which do not contain postal order etc. will not be considered.

Among other things, the application typed on plain paper with passport size photograph pasted should contain (1) the name of the Scheme (2) Subject in which scholarship required (3) Name of candidate with surname and full postal address in capital letters (4) Date of birth and age as on 1-10-1984 (5) Academic record starting from High School/Higher Secondary Examinations, showing year, percentage of marks, division and subjects taken upto Post Doctoral level, (6) Details of research experience specifying the period after acquiring the minimum prescribed qualifications. (7) Present employment position with full name of employers/sponsorers, (8) Whether or not belongs to Scheduled Caste/Tribes or Other backward class (A certificate to this effect is also to be attached) and (9) Whether he/she had been abroad. If so, duration of visit and purpose thereof may please be indicated.

The complete application form should reach Shri S.S. Grover, Assistant Educational Adviser, (ES.1) Ministry of Education and Culture (Department of Education), Shastri Bhavan, New Delhi-1100 01 **by 31st July, 1984 positively.**

davp 511(96)/83

Birla Institute of Technology and Science
Pilani (Rajasthan) 333 031

Faculty Recruitment Advertisement No. FR/1/84

If you are a dynamic and energetic person interested in a challenging academic career in close interaction with industry, we have immediate opportunities of faculty positions at junior levels available to you in the disciplines of Engineering (Chemical, Civil, Electrical & Electronics and Mechanical); Computer Science; Instrumentation; Economics; Mathematics; Physics; Pharmacy and Management.

Teaching and research challenges are in the interdisciplinary areas like Engineering Sciences, Computer Applications, Instrumentation, Systems Engineering, Control Systems, Statistics, Optimization, Operations Research, Molecular Biology, Genetic Engineering, Instrumental Analysis, Analytical Chemistry, Mathematical Economics, Science and Society, Developmental Processes etc., Interaction with industry is through Practice School, M.E. (Collaborative) Programmes, Technology Innovation Centre and Educational Consultancy.

(A) **If you are already a Ph. D** in one of the disciplines mentioned in the first para you will participate in teaching and research in the areas mentioned above in addition to teaching courses in your own discipline, and also will have opportunities to join the practice school or M.E. (Collaborative) programmes with the industries and guide research.

(B) **If you possess a Master's degree in Engineering or its equivalent**, you can, along with employment, work for a Ph.D in the areas of national relevance in which certain modern industries are collaborating with BITS at off-campus stations at Calcutta, Bombay, Nagda and Delhi or in allied areason the campus itself.

(C) **If you are a B.E. or M.Sc. in Mathematics, Physics; Economics or a graduate in Pharmacy or Management**, you may be offered faculty position of Teaching Assistantship with permission to work part-time for M.Phil (New Scheme) or M.E. (Collaborative) and then Ph.D.

M.Phil (New Scheme) is of one-year duration, and emphasises Systems Areas, Computer Skills and Instrumental Analysis; M.E. (Collaborative) is of 2-year duration and is run at the above off-campus centres. Persons with traditional background should be prepared to be trained to take up above modern areas of knowledge which provide unusual opportunities of growth for candidates of non-engineering disciplines.

(D) The Institute can also accommodate persons who may wish to join for stated number of years maintaining their lien elsewhere.

All programmes of studies in the Institute are based on foundation courses which include a strong base of Physics, Mathematics and interdisciplinary subjects mentioned in para 2. All teachers are required to participate in teaching these courses just as all students who work for various degrees of BITS have to study these courses. Similarly the Institute's involvement in research, educational consultancy, and Technology Innovation emphasises these areas of knowledge.

The Institute offers UGC salary scales. The Dearness Allowance is presently of the order of 35% of basic salary. All faculty get special benefits like Contributory Provident Fund, Pension, Housing provided on nominal rental, Tuition fee waiver for faculty, spouse and children if admitted to the programmes of the Institute and with similar facilities in most schools in Pilani. Due consideration will be given to Scheduled Caste and Scheduled Tribe candidates.

If you are interested in pursuing the above growth opportunities, you may send two copies of your bio-data on plain paper giving complete details of educational career, courses/subjects taken for the various degrees to the undersigned clearly indicating at the top the category (A), (B), (C) or (D) to which you belong and marked FR/1/84.

We may follow this up by asking for additional information based on the reading and scrutiny of your bio-data.

This Advertisement does not carry a specific last date and is valid for one year (end of January 1985) and the Institute will review cases more than once during the year.

Regarding admissions to the various programmes of BITS during 1984-85, see separate advertisement to be issued by Admissions Officer, BITS in May 1984.

REGISTRAR

G. B. PANT UNIVERSITY OF AGRICULTURE & TECHNOLOGY

PANTNAGAR-263145 (DISTT. NAINITAL)

ADMISSION NOTICE

A competitive Entrance Examination for admission to the First Year of the following BACHELOR'S and MASTER'S Degree Programme will be held on Sunday the 6th May, 1984 from 8 A.M. to 11 A.M. at AGRA, ALLAHABAD, COIMBATORE, DELHI, HYDERABAD, LUCKNOW, PANTNAGAR, ROORKEE and VARANASI centres.

A–Bachelors Degree Programmes

Programmes	*Minimum eligibility qualifications*
1. B.Sc. Ag. & A.H.	Intermediate with Agriculture/Mathematics/Biology from U.P. Board, Allahabad, or equivalent examination.
2. B.V.Sc. & A.H.	Intermediate with Biology/Agriculture from U.P. Board Allahabad or equivalent examination.
3. B.Sc. Home Science (for girls only)	High School from U.P. Board Allahabad, or equivalent examination.

NOTE : 1—Candidates appearing in the above Boards' Examinations in 1984 are also eligible to appear in the Entrance Examination provided their results are declared by 15th July 1984, otherwise they will stand disqualified. 2—Admissions to the B. Tech. programme in Civil, Electrical, Mechanical, Agricultural, Electronics & Communication, and Production Engineering branches of this University will be made through a joint Entrance Examination conducted by the Coordinator, Admission Committee, Motilal Nehru Regional Engineering College, Allahabad, U.P.

Maximum Age Limit : 22 years on 30th November 1984 (3 years relaxation for Scheduled Castes/Scheduled Tribes, and Backward Classes candidates).

B–Master's Degree Programmes

Subjects: Agronomy-20, Agril. Economics-12, Plant Pathology-10, Plant Breeding-20, Horticulture-10, Soil Science-20, Entomology-12, Rural Banking & Agril. Economics-10, Animal Breeding-10, Animal Nutrition-10, Dairy Husbandry-5, Poultry Husbandry-5, Agril. Communication & Extn.-10, Rural Development Management-10, Agricultural Statistics-5, Biochemistry-12, Microbiology-10, Physics-8, Mathematics-6, Environmental Science-10, Plant Physiology-6, Food Technology-10, Vety. Bacteriology-3, Vety. Pathology-4, Vety. Hygiene & Public Health-3, Vety. Parasitology-4 Vety. Physiology-4, Vety. Pharmacology-4, Vety. Anatomy-4, Vety. Surgery-6, Vety. Medicine-4, Vety. Gynaecology & Obstetrics-4, Irrigation & Drainage Engineering-10, Soil & Water Conservation Engg-6, Farm Machinery & Power Engg.-10, Process Engg.-10, Structural Engg.-10, Hydraulic Engg.-10, Design & Production Engg.-5, and Home Science: Foods & Nutrition-8, Clothing & Textiles-4.

Eligibility qualifications: 55% marks in aggregate or above in Bachelor's degree examination conforming to the relevant group of subjects, or an equivalent OGPA from a recognized University, and 33% marks in the Entrance Examination separately in (1) Aptitude Test, and (2) Subject Matter Test.

NOTE: Those who are appearing or have appeared in the Bachelor's degree examination of different Universities in India can also appear in the above Entrance Examination provided that their results are positively declared by 15th July 1984, otherwise they will stand disqualified.

Separate provision exists for the Junior Fellowship Holders of the ICAR/CSIR/UGC provided the fact of having been selected for the fellowship is intimated at least a week before the date of Entrance Examination. In-service candidates nominated by the ICAR/Govt. of India/Development Departments of States/other Indian Universities/Staff of the G.B. Pant University of Agriculture & Technology, will be considered under sponsored category.

Liberal financial assistance admissible as per rules during the period of study for deserving students.

Printed application form prescribed separately for Bachelor's Degree and Master's Degree programmes, costing Rs. 10.00 each with Information Brochure can be obtained on request from the Registrar (Admission) by sending a crossed Bank Draft for Rs. 10.00 in favour of G.B. Pant University of Agriculture & Technology, either on the State Bank of India, or United Commercial Bank, Pantnagar branch, along with a self-addressed envelope of 28 x 13 cm. bearing postage stamps of Rs. 3.00, or may be obtained on cash payment at the counter. Cheques, Money Orders, and Postal Orders, shall not be accepted. The Degree Programme for which the Form is required must be written in Capital letters on the self-addressed envelope.

Last date for Receipt of Applications: Upto **March 20, 1984** with fee of Rs. 50.00 (Rupees Fifty only) for all the above Centres, and **March 21 to April 5, 1984** with a late fee of Rs. 20.00 (Rupees Twenty) more in addition to the prescribed fee of Rs. 50.00 for Pantnagar centre only.

O.S. Misra
REGISTRAR

CLASSIFIED ADVERTISEMENTS

INDIAN INSTITUTE OF TECHNOLOGY
MADRAS

Advertisement No. IITM/R/2/84.

Applications are invited for the following posts at this Institute.

1. **Chief Techno-Economic Officer** (Two Posts) in the pay scale of Rs. 1500-60-1800-100-2000 plus allowances for the Centre for Rural Development.

Qualification & Experience

Bachelor's degree in Agriculture/Electrical/Mechanical Engineering preferably with post graduate degree. Minimum of ten years experience in field operation, agricultural management, pisciculture, designing machinery in industrial production, shop floor management and training.

Experience in systems analysis and earlier involvement in rural development projects is desirable.

No. of posts: (Two)—One post in the area of Agriculture and the other either in Electrical or Mechanical area.

2. **Programmer Grade II** (Two Posts) in the pay scale of Rs. 650-30-740-35-880-EB-40-960 plus allowances for the Department of Computer Science & Engineering.

Qualification & Experience

Degree in Engineering or a first class Master's degree in Science. Three years experience in programming, using a high level language like FORTRON, COBOL or PL/I in a third generation system.

Experience is relaxable in the case of highly qualified candidates or candidates with degree in Computer Science.

One post for Scheduled Caste and one post for Scheduled Tribe candidates are reserved. In case suitable SC/ST candidates are not avaiable, the posts will be filled by general candidates on temporary basis.

3. **Secretary to Director** (One Post) in the pay scale of Rs. 650-30-740-35-880-EB-40-960-40-1000-EB-40-1200 plus allowances.

Qualification & Experience

Graduate with pass in Typewriting (English-Higher) and Shorthand (English-Higher). Ten years experience as Upper Division Clerk/Stenographer or equivalent, out of which atleast five years should be as a Stenographer with capacity to execute efficiently and promptly the assignments given by the Director.

Other things being equal preference will be given to Scheduled Caste/Tribe candidates.

Those who applied in response to our earlier advertisement No. IITM/R/12/83 need not apply again. Their applications will also be considered.

4. **Junior Engineer (Electrical)** (Two Posts) in the pay scale of Rs. 425-15-500-EB-15-560-20-700 plus allowances for the Engineering Unit.

Qualification & Experience

Diploma in Electrical Engineering with Supervisory Competency Certificate and three years of experience in HT & LT lines and Electrical installations OR Degree in Electrical Engineering with Supervisory Competency Certificate.

One post for Scheduled Caste and one post for Scheduled Tribe candidates are reserved for whom the requirement of experience is relaxable if they otherwise qualify.

In case suitable SC/ST candidates are not available, the posts will be filled by Ex-servicemen/Physically Handicapped and/or General candidates (temporarily) as applicable.

For application forms please address the Registrar, Indian Institute of Technology, Madras-600 036 with a self addressed stamped (90 paise for posts 1, 2 & 3 and 50 paise for post 4) envelope (26 cm x 11 cm). Applicants in the service of Government establishments, Public Sector undertakings should apply through proper channel, otherwise their applications will not be considered.

The last date for receipt of completed applications is **12th March 1984**.

REGISTRAR

PANJAB UNIVERSITY
(CHANDIGARH)

Advertisement No. GP-1/84 (ULP

Applications are invited for the following temporary posts upto 31-3-85 (likely to continue) under the University Leadership Project (COHSSIP) in Political Science, so as to reach the Registrar, Panjab University, Chandigarh alongwith Postal Orders of Rs. 10/- by **12.3.1984**. Fourteen days extra time is permissible to the persons who have to submit their applications from abroad.

Reader — One (Rs. 1200-50-1300-60-1900).

Lecturer — One (Rs. 700-40-1100-50-1600).

Candidates for the post of Reader who do not possess a doctoral degree are required to submit 10 typed/cyclostyled copies of brief resumes of their published work.

Application forms alongwith detailed qualifications and instruction etc. can be obtained from the Cashier, Panjab University, Chandigarh personally on payment of Rs. 2/- or by making written request to the Finance & Development Officer, Panjab University, accompanied by self addressed stamped envelope of 23 x 10 cms and Postal order of Rs. 2/- drawn in favour of the Registrar, Panjab University, Chandigarh.

Note: **For details see instructions for candidates enclosed with the application forms.**

CENTRAL INSTITUTE OF ENGLISH AND FOREIGN LANGUAGES
HYDERABAD-500 007

Advertisement No. 1/84/1984

The CIEFL announces the following courses for the academic year 1984-85.

Beginning 1st June 1984

M.A. (Correspondence-cum-Attendance) in French/German/Russian (3 years with 8 weeks attendance at the Institute every year during June and July.).

Beginning 1st July 1984

A. **English**

1. A (Post-MA) 2-Semester M. Litt. (Residence requirement : 12 months —July to June).
2. Ph.D. (6 Semesters—3 years).
3. Post-Graduate Diploma (Post-MA) in the Teaching of English/English Studies (2 Semesters—July to March).

B. **Foreign Languages**

1. Bridge Course in Modern Arabic—This is an accelerated course to prepare the fresh M.A.s for admission to Post Graduate Diploma in the Teaching of Modern Arabic (PGDTA) and M. Litt. in Modern Arabic. (One Semester).
2. Post-Graduate Certificate (Post-MA) in the Teaching of French/German/Russian. (One Semester July to October).
3. Post Graduate Diploma (Post-M.A.) in the Teaching of Modern Arabic/French/German/Russian (2 Semesters : July to March).
4. M. Litt. in Modern Arabic/French/German/Russian (3 Semesters).
5. Ph.D. in Modern Arabic/French/German/Russian (6 Semesters).
6. Advanced Diploma in Translation in French (2 Semesters).

A limited number of UGC and CIEFL fellowships for M.Litt. and Ph.D., and for other courses, stipends for sponsored teachers and merit scholarships for those not in service are available.

For further details, entrance qualifications, prospectus and application form, write to the Editor, CIEFL, Hyderabad-500 007, enclosing a crossed postal order for Rs. 4/- towards the cost of prospectus and Re. 0.50 towards postal charges, drawn in favour of the Registrar, CIEFL, Hyderabad. Copies of the prospectus will be available for supply from 1st March 1984.

Last date for receipt of filled-in applications for all courses except for Arabic is **31-3-1984** and for Arabic it is **30-4-1984**.

K. Jayashankar
REGISTRAR

Rs
41

BIRLA INSTITUTE OF TECHNOLOGY

MESRA : RANCHI

Admission 1984—B.Sc. Engg. and B. Pharm. (4-Year) Degree Course

Applications are invited for admission to the B.Sc. Engg. (4-Year) Degree Course in Civil, Electrical, Mechanical, Electronics & Communication, Computers, Production Engineering and B. Pharm. (4-Year) Degree Course in Pharmaceutical Sciences.

Minimum Qualification

For B.Sc. Engg. (4-Year) Degree Course : I.Sc. or 10+2 or equivalent examination with Physics, Chemistry and Mathematics.

For B. Pharm. (4-Year) Degree Course : I.Sc. or 10+2 or equivalent examination with Physics, Chemistry and Biology.

THOSE APPEARING THIS YEAR AT THE VARIOUS QUALIFYING EXAMINATION ARE ALSO ELIGIBLE TO APPLY. Seats are reserved for SC/ST candidates.

The last date for receipt of completed application form is 15th April, 1984.

Admission will be made on the basis of an Entrance Examination which shall be held on 26th May and 27th May, 1984 at Ranchi and other regional centres at Allahabad, Agra, Bhagalpur, Bhubaneswar, Bangalore, Bombay, Calcutta, Chandigarh, Delhi, Gauhati, Hyderabad, Jamshedpur, Jaipur, Lucknow, Madras, Muzaffarpur, Nagpur, Patna and Sindri, provided sufficient number of candidates opt for the proposed centres.

Application forms can be obtained personally against cash payment of Rs. 10/- from the Institute Office at Mesra or from the Institute's Extension Centre at Lalpur, Ranchi.

Application forms can also be obtained by post on pre-payment of Rs. 10/- by Crossed Postal Order, payable to the Registrar, Birla Institute of Technology, Ranchi; the request should accompany a 'slip' of size 13 cm.×4 cm. containing the address of the applicant, clearly mentioning the form required i.e. B.Sc. Engg. or B. Pharm.—as the case may be.

J. B. Saksena
REGISTRAR & O.S.D.

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University News

MARCH 1, 1984

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UPDATED SUPPLEMENTS ARE AVAILABLE BI-MONTHLY FROM 1984 ONWARDS @ RS. 460 (US $ 80) PAYABLE IN ADVANCE ANNUALLY.

Editor : SHIV LAL

Research by : Institute For Electoral Studies, New Delhi
Publishers : The Election Archives
CA-33, Tagore Garden, New Delhi-110027

UNIVERSITY NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :
M.S. RAMAMURTHY

Food Science & Technology
Information Service
12 MAR 1984
MYSORE

INSAT-1B and Higher Education

Text of the paper presented by Prof. Ram Takwale, Vice-Chancellor, University of Poona, at a seminar organised by Delhi University.

INSAT-1B is the precursor of the communication revolution in India. New communication and processing media with audio-visual communications and computers are entering quite rapidly in economic, industrial and social life of our country. Higher education has to prepare itself to adopt and use the new technologies for various functions of educational institutions.

I. Facilities of New Technologies

Universities carry out mainly three functions, research, teaching and extension. Creation of knowledge and expertise, dissemination of these to students and society are the well accepted role of the educational institutions. Communication media along with computer capabilities offer economic, fast and convenient ways of carrying out storing, processing and transmitting knowledge.

Audio and video tapes, floppy discs, magnetic discs, video discs etc. are available for storage of information. The information could be recorded either by video cameras, audio recorders of different types or by data entry systems through keyboards and can be processed through micro processor devices and transmitted to any other place through telephone wire, cable radio and T.V. waves, micro waves etc. It is received either on the T.V. screen or heard or recorded on receiver. Decreasing size and versatile nature of the electronic gadgets are developed so fast that within a short period they would be made available to individuals and institutions at a fairly low cost.

The new technologies and its utilization have the following important features:

(a) **Economical**: micro-miniaturisation has reduced size & automation increased production resulting in lesser costs.

(b) **Versatile**: Potential of hardware is exploited for wider uses even by common man in diverse activities.

(c) **Wider accessibility**: above two characteristics would allow practically every one to use both for receiving information and creating information.

(d) **Decentralised nature**: lower costs of recording and display equipment allows wider use and many creative and innovative uses by individuals and groups. Instead of uniformity, this technology is capable of promoting diversity and would suit a country with cultural diversity.

II. Communication Technology in India

Progress in communication technology in the developed countries is changing their way of life. It would take some more time, possible 5-10 years, to get that technology to India and initially it might be beyond the reach of the common man. However, India is following the same path of scientific & technological development and has entered into the race with INSAT 1-B. Within two years, 70% of the Indian population would be able to watch TV programmes through the national TV-network. TV would be available for Rs. 1200/- (black and white) and Colour for Rs. 5000/-. Efforts are being made to manufacture small computers or personal computers and they would be made available to every school and college. Computer literacy would be developed amongst the new generation. Availability and lower costs of microprocessor chips would generate varied applications in all walks of life. Economic backwardness may not allow these gadgets to reach every family or individual, but proper policy and programmes may help us in taking the new technologies to community and institutions a boon in disguise.

III. University Role

Present forms of teaching-learning have essentially two components, one is the transmission of knowledge of information and the other is imparting skills and values. When printing was not known teaching was done through oral instructions. With the advent of printing technology, books became important media of teaching and learning. With new technologies of audio-visual communication, transmission of information will cease to be a function of teacher and would be taken over by the new technology. However, role of a teacher as a demonstrator of skills and cultivator of values would remain forever and would acquire prominence.

Full time formal education is not the right way for large enrolment of students. The education has to become diversified to fulfil a variety of social needs and has to be vocational and relevant. Open University in U.K. has successfully offered courses even in science and technology subjects by supplementing distance education media with home experimental kits and lab works during vacation periods. Many aspects of knowledge, skills and values cannot be learnt by remaining within four walls of the University. In fact life and society often provide good opportunities of learning. In a learning society every place could be a learning place. Hence the role of a University needs to be widened to offer non-formal courses for part-time and own-time students, besides the full time formal courses.

The Universities have recently acquired function of extension of knowledge to fulfil its social obligations and to become responsive to social problems and needs. Formal and non-formal courses could now be offered through the centres of continuing education by using new technologies, which is yet to enter our educational institutions but whose potentialities are well recognised.

New technology would essentially help in three functions of teaching:

(a) library function by storing knowledge at one or many places with linkages amongst themselves and with users.

(b) delivery of knowledge by transmitting stored information through broadcast and non-broadcast modes.

(c) lecturing in which one presents information with comprehension by processing the information through computers and presenting it through communication net-work in different forms easy to understand and learn.

(d) part of tutoring by creating interactive learning packages.

With wider use of technology, functions of teacher are also elevated and he would have to do higher task of preparing educational information for new media by understanding both the student learning process and capability and scope of the technology.

IV. Measures for adoption and development

With a long term goal of establishing communication information network accessible to every institution and individual, we should start building the net-work, part by part, for various segments of education. Since the technology is essentially coming from the developed countries, we should accept and adapt it to suit our educational programmes. We may adapt those educational programmes that are of universal nature but should categorically avoid culture specific programmes. However, thrust should be not to copy but to evolve and create our own system that would suit our people and culture. Following measures are proposed for the purpose:

(i) Research and development programmes be undertaken to develop appropriate technology to suit our educational functions.

(ii) Teacher orientation and training programmes be organised to train teachers to use this medium for distance learning.

(iii) Teaching packages on various subjects be prepared and disseminated through broad-

(*Continued on page 4*)

Need for a Change in Medical Teaching

M. N. Ghosh*

The teaching of modern medicine was started in India by the British some time in the mid 19th century. Medical colleges in Calcutta and Madras were established in 1835 and in Bombay in 1845. By 1946 there were 19 medical colleges and an equal number of medical schools in undivided India.

In 1946 the Health Survey and Development Committee (Bhore Committee) emphasized the need for expanding training facilities in modern medicine. In 1961 the Health Survey and Planning Committee (Mudaliar Committee) suggested guidelines for the training of doctors and establishment of medical colleges. Now, we have more than 100 medical colleges in India.

Phenomenal Rise

There has thus been a phenomenal rise in the number of medical colleges since independence. With this, however, there has not been much improvement in the quality of medical education. The medical teaching by and large continues to be the same as introduced by the British despite significant changes in the disease pattern and in the health needs of our people during the last three and a half decades.

At present we are producing fine young doctors who are more anxious about, and probably competent in diagnosing rare and complicated diseases for which perhaps no treatment is available, or are struggling to produce research papers and feeling frustrated at not being able to do so. Not many of them, however, seem to be much interested in, or good at, caring for a vast number of patients suffering from common ailments, or tropical diseases like malaria, amoebiasis and leprosy for which effective remedies are available.

The fault does not lie with them but with the present educational system. The young graduates are sometimes taught rare and complicated topics or methodologies, and probably examined on these, although no clinical situation can be identified on such activities. They have learnt to be proud of the knowledge they have acquired but not of its application. For instance, they may have at their finger-tips the different types of urethral catheters, but may never have passed one even under supervision.

The general goals of the educational programme in medical colleges are well known, such as producing a doctor who is well informed in medical science, skilled in the technique of diagnosis and therapy, and committed to the preservation of health as well as the alleviation of illness, both physical and mental. The difficulty arises over the translation of such general goals into specific educational objectives. It is the initial step of formulating these objectives which is the most important and at the same time most difficult to deal with. But once this is done on the basis of the country's health needs, medical education becomes more relevant.

No single teaching method can serve all educational needs any more than a single drug can cure all diseases. More effective use needs to be made of teaching and learning methods, as also of the materials, with greater emphasis on active learning than on passive teaching. A teacher should be a facilitator; he should facilitate learning and help students to acquire knowledge—that is, to understand, analyse, synthesize and evaluate; to acquire skills; and to develop attitudes.

Present day evaluation usually focuses upon the educational products, that is, students, rather than the educational process. Examinations are among the least understood and most misused tools of education. Neither the examiner nor the student usually knows their exact objectives. What do our examinations really measure? Most of the studies undertaken to analyse this lead to the conclusion that in the main, the examinations measure the recall of isolated facts. Our examination system has to be modified in such a way that it gives the maximum possible information both to the students and to the faculty about how successfully the educational objectives formulated in terms of clearly stated behavioural objectives are being achieved.

Since most teachers in medical colleges, though knowledgeable in their own disciplines, have generally had little or no training in pedagogy, such training is necessary for the improvement of the education of the trainees. To accomplish this goal a regular training programme for health professionals will be needed. Since an enormous number of health professionals are to be trained not only in India but also in other developing countries, the World Health Organization suggested creation of a "multiplying effect in teacher training". At an inter-regional centre, the staff of a number of regional teacher training centres (RTTCs) are trained as educational specialists. Those at the RTTCs in turn provide special training for the staff of national teacher training centres (NTTCs) who will ultimately be responsible for instructing the teaching staff in respective countries. The South East Asia Region has two RTTCs, one in Peradeniya (Sri Lanka) and the other in Bangkok (Thailand).

The first NTTC for health professionals in India was established by the Government of India with WHO assistance in 1975 at the Jawaharlal Institute of Postgraduate Medical Education and Research

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**Ex-Director, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.*

(JIPMER), Pondicherry. The first national course on teacher training in educational science was held in 1976 with the help of three faculty members of JIPMER, who had undergone a course on educational science at the RTTC at Peradeniya, and two WHO short-term consultants. Since then regular courses of about 10 days' duration are being held twice a year; these are attended by some 20 teachers (from the level of lecturer up to the level of dean/princi pal) from different medical colleges in the country.

The general goals of NTTC are: (a) training of teachers in educational science and technology; (b) development and application of the educational process, such as educational planning, curriculum development, teaching techniques and instructional materials, and evaluation: and (c) educational research.

Evaluation Methods

An analysis of the following studies shows that many of the teachers who participated in such courses have brought about some changes in the teaching/learning and evaluation methods in their respective institutes. These changes, however, could be brought about much faster with more support and encouragement from the deans, principals and administrators. The most important change noticeable among the participants was the willingness to change. We should take advantage of this attitude and try to bring about a change in the present curriculum making it more relevant to the health needs of the community, the region and the country at large that the medical graduates are going to serve.

It is heartening to note that the Union Ministry of Health and Family Welfare has constituted a high powered committee, under the chairmanship of Dr Shantilal J. Mehta, to go into the present system of medical education in its entirety and to suggest ways of making it more relevant to Indian conditions. It is to be hoped that this committee will give special attention to the subject of medical pedagogy. The effort, however, will not bear fruit unless the present examination system is modified according to a new concept of medical education relevant to the health needs of the community and the country.

[*Courtesy*—The Statesman]

INSAT-1B and Higher Education

(*Continued from page 2*)

casting as well as non-broadcasting modes. For this purpose 'Library storage' and transmission and dissemination facilities be established. Since the task is stupendous many institutions be involved in the task by adopting collaborative working based on democratic decentralization.

(iv) Operating and maintaining the technology for continued service would pose a big problem. Training programmes for this purpose be started early. Since the technology would be used in rural areas also, the trainee should be educated with multiple skills.

(v) It is the past experience that benefits of modern development usually go to already developed urban centres and elite class. Specific policy and programmes be evolved to see that the benefits reach to disadvantaged regions and groups.

(vi) Educational networking for research and developmental work at post-graduate level be taken up as the national educational task for giving information support to every scholar.

(vii) Pilot programmes at a few places for 'mini-networking' be taken up with integrated approach and collaboration from various agencies connected with creation and dissemination of information. Success of the pilot projects would help in building up national information network for educational and other purposes.

Establishment of the communication information net-work would radically change the functions and role of educational institutions and would provide learning opportunities to many. Adoption of these new functions essentially aimed at distance learning will open out the University dispersing the teaching-learning functions to all sections of society. Educational institutions have to play a great role in effecting this dissemination of teaching-learning—learning by participating in creating and developing hardware and software and also by watching and controlling their quality and standards and avoiding misuse and abuse of the national information network.

Since the new communication technology reduces personal contact and parts a machine between a student and teacher, we have to develop new techniques for this type of 'distance education'. Further, any system does not adopt innovation easily and would oppose the change by creating internal opposition, that would be effective, at least in the initial stages, till wider acceptability and credibility of the new technology is established. Wider orientation and participation practically on 'mass scale' is the way for the lasting success. □

Sixth New Delhi World Book Fair

— A Report on AIU's Participation

The National Book Trust (NBT) was constituted in August 1957 as an autonomous organisation under the Ministry of Education to promote reading habits as one of the objectives To inculcate this habit, publicity and promotion plays an important role. It has been accepted that the most effective measure for promoting books is book fairs and exhibitions. The NBT has made an effective use of this media in furtherance of this objective. Apart from arranging book fairs at regional and national levels, it has been organising World Book Fairs since 1972. Initially the World Book Fair was organised in response to a call by UNESCO to celebrate International Book Year. Later it was adopted as a regular feature every alternate year.

The Sixth New Delhi World Book Fair was held from February 4-14, 1984 at Pragati Maidan, New Delhi. About 1000 publishers from India and 100 from abroad displayed over five lakh titles in English and Indian languages. The Association of Indian Universities (AIU) arranged a collective display of AIU publications and those of the member-universities.

The World Book Fair was greatly appreciated by the book lovers and the book trade because it enabled the book lovers to browse over a large collection of books in one single place and also provided an opportunity for meeting and interaction with representatives of the book trade.

The titles displayed at the AIU stall were specialised publications covering the areas of agriculture, engineering, technology, medicine. Special mention should be made of the publication of Haryana Agricultural University and University of Roorkee.

Shri P.V. Narasimha Rao, Minister for External Affairs visited the AIU stall on February 3, 1984 after inaugurating the World Book Fair. He evinced a keen interest in the publications and enquired about their market in other countries of the world.

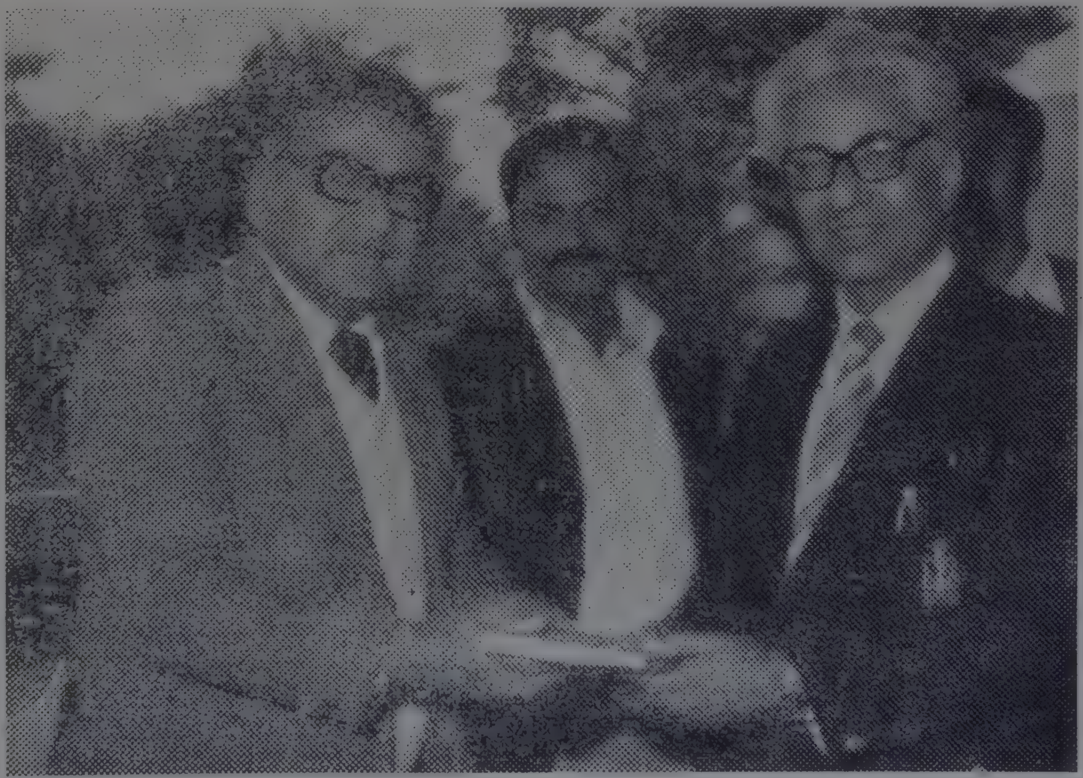
Smt. Indira Gandhi, Prime Minister of India, also visited the AIU stall on 10th February 1984. She lauded AIU efforts in displaying university publications. She was of the view that all the universities should be represented in future Book Fairs and those, which do not have sufficient publications, may display posters and other information material on such occasions. The Prime Minister suggested that, at the next world book fair, a whole pavilion could be assigned for the publications of Indian Universities. She praised the lead given by AIU.

The other dignitaries who visited the AIU stall included Shri J.B. Patnaik, Chief Minister of Orissa, Dr. B.D. Sharma, Vice-Chancellor, North Eastern Hill University, Shillong, Prof. T.K.N. Unnithan, Vice-Chancellor, University of Rajasthan, Jaipur, Dr. K.G. Deshmukh, Vice-Chancellor, Amravati University, Amravati, and Prof. Ramlal Parikh, Vice-Chancellor, Gujarat Vidyapith, Ahmedabad.

The ninth edition of Handbook of Medical Education was released on February 14, 1984, the concluding day of the Book Fair, by Commander Sat Bir, Commissioner, Kendriya Vidyalaya Sangthan, New Delhi. The effort of the Association to bring these handbooks for the guidance of +2 students desiring to pursue professional courses like medicine, engineering, agriculture, etc. was commended. He felt that such informative handbooks should be purchased by the libraries of all Secondary Schools and also made available to students who wish information on career guidance.

By all accounts the display of AIU and University publications was praiseworthy and received favourable mention in the newspapers. The AIU stall was shown on the T.V. thrice while covering the inaugural function, reporting the visit of Prime Minister, and the final round up.

Several suggestions were made by the visitors. Most of them impressed upon the need for a catalogue of publications of all the universities. They all stressed the desirability of making available all the publications of Indian Universities under one roof. Once accomplished, these measures would boost the sale of university publications and encourage the universities to strengthen their publishing programmes.



Commander Sat Bir (right), Commissioner, Kendriya Vidyalaya Sangthan, releasing the ninth edition of Handbook of Medical Education.

XLIV Session of IHC held at Burdwan

The Forty-fourth session of Indian History Congress (IHC) was held during 22-24 December, 1983 at Burdwan University; it was organized within less than a month's time. A pity that due to certain unavoidable circumstances this fortyfourth session of the IHC could not be held at the Guru Nanak Dev University of Amritsar, the originally-fixed venue; it had to be shifted at the very last moment to Burdwan University.

The IHC was established in 1935 and today it has a membership of over 3,300.

The Inaugural session of the Congress was organised at the Burdwan Health Fair Pandal at the Rajbati campus on 22nd December and was inaugurated by Shri A.P. Sharma, Chancellor of the University and Governor of West Bengal. Promoting the activist concept of 'the present as history', he described history as 'a guide to action'; for

"History, as I see it, is not merely about the past. In the stream of history the past flows into the present; and the present unfolds the future. In this three-dimensional critique of life, history is like a note of music; it is, as Walter Landor told us long ago, nothing but as it appertains to what is past and what is to come. It is the present, as some would say, which is history. In other words, we need history, not merely to understand the past, but to understand the present and thus *to change the present*."

In his address welcoming the delegates, the Vice-Chancellor of the University analyzed the cultural specificities of the region served by Burdwan University—the *Radh* Bengal. He also called for a unity of *loka* and *lokottara* knowledge in historical work.

Speaking of history as not merely an account of the heroes and the great men but as a record of mass social changes, Professor Sambhu Ghosh, West Bengal's Minister for Higher Education, who attended the Burdwan session of the IHC as the representative of the State Government, said that even today most of the history syllabuses betrayed a colonial heritage and urged the historians present to battle for a scientific syllabus of history.

In her address as the General President of the session, Professor (Miss) Romila Thapar made a perceptive survey of the new trends in the historiography of ancient and early medieval India. The study of these periods, she said, called for new concepts and/or a considerable refining of the existing concepts including such terms as those of 'tribe', 'peasant', 'varna', 'jati' etc. In an apparent aside against mono-causal historical expositions, Dr. Thapar concluded: "The relating of ideology to historical reality can result not only in new ways of examining a historical situation and be used to extend or modify the analysis from other sources but can also help in confirming the reality as derived from other sources. (It might also stir the still waters of contemporary interpretations of early Indian thought.) Such a study, incorporating elements of deconstruction, would sharpen the awareness of concepts and theoretical frameworks."

The academic meetings of the Congress were spread over the three days of the conference. More than 600 delegates attended the session; and about 200 delegates directly contributed research-papers. Apparently inspired by Perry Anderson's renegade Marxian view that 'pre-capitalist modes of production cannot be defined *except* via their political, legal and ideological superstructures, since these are what determine the extra-economic coercion that specifies them', Dr B.D. Chattopadhyay of Jawaharlal Nehru University made out, in his Presidential Address to the Ancient India Section of the IHC, a strong case for the study of politics and polity in early medieval India, not in the traditional manner, not in the form of isolated and segmented units in ritual terms nor by the notion of feudalism nor by the dichotomy of centralization-versus-decentralization, but in terms of the State formation and the

Shri A.P. Sharma (right), Governor of West Bengal & Chancellor of Burdwan University, who inaugurated the XLIV Session of Indian History Congress.

continuous extension of State society, in terms of what has been called "integrative polity'. Professor Y. Subbarayalu of Thanjavur presided over the Section on Historical Archaeology, Epigraphy & Numismatics; and Professor Bhagwandas Gupta over the Section on Medieval India. While Professor Amalendu Guha of Calcutta, as President to the Section on Modern India, spoke on 'Nationalism : Pan-Indian & Regional in a Historical Perspective', Professor Dwijendra Tripathi of Ahmedabad, presiding over the Section on the countries other than India, said that the study of non-India history in this country had 'miles to go'.

Other interesting highlights of the Burdwan session of the IHC included a special lecture by Gen'ichi Yamazaki on the current state of study on ancient Indian history in Japan, and a symposium on 'Tribe & Caste in Indian History'. The Urban History Association of India also presented a symposium, to which Professor Irfan Habib of Aligrah and Professor Ravinder Kumar of New Delhi contributed two interesting papers.

The members of the IHC elected Vice-Chancellor J.S. Grewal, the noted historian of Panjab, as the General President of the next, forty-fifth session. A sixteen member Executive Committee was also elected.

The cultural items offered to the delegates on the occasion of the Burdwan session of the IHC were also highly valued. The Bengali drama, 'Last Seven Days of Julius Caesar', presented by Calcutta's Theatre Commune, thanks to the generosity of the Burdwan Committee for Rural Health, was liked by one and all; while the music-cum-dance portrayal of the Six Seasons of India, by courtesy of Padmaja Naidu College of Music, earned a hearty applause. This latter event was described in the official statement of the IHC management as 'a rare experience'.

All in all, the Burdwan session of the IHC caused quite a few ripples; it was, on all counts, a great success. And this, despite the fact that the University was not called on to spend a great deal of money.

Seminar for teacher educators at Gujarat Vidyapith

A state level seminar for the teacher-educators working in the colleges of Gujarat State was organised in the Gujarat Vidyapith during 16th & 17th January 1984. Dr. K.E. Bugge, Professor of Education, Royal Danish School of Educational Studies worked as a resource person. 19 Teacher educators participated in the seminar. Public lectures on Grundtwig and Contemporary Educational Thought were organised as a part of the seminar.

Educational problems were discussed in the light of the keynote paper from Professor Ramlalbhai Parikh and Dr. K.E. Bugge. The points of discussion were language and education, child centred education, Gandhian ideas, self reliance, conscientigation and the new Marxism.

The Folk High School movement in Denmark was discussed and the participants got enriched from the lectures of Dr. K.E. Bugge.

The second part of the seminar was organised as Perspectives of Teacher Education curriculum. 24 Principals of colleges of Education in Gujarat State attended the seminar on 6th & 7th February 1984. The curriculum improvement programme based on NCTE framework for teacher education cirriculum was discussed at length. Dr. Torben Krog, Principal, College of Education, Copenhagen, Denmark participated as a resource person, He delivered a public lecture on Perspectives of Teacher Education in Scandinavia with special focus on Denmark. Dr. Torben Krog discussed the concept of the comprehensive school, the concept of Gymnasia, preparing teachers for folkeskole, requirement of admission, four years curriculum, Education for quality, Education as an investment, the role of Royal Danish School of Educational Studies, Education & Research. The Vice-Chancellor, Prof. Ramlal Parikh inaugurated the seminar.

ASSOCIATION OF INDIAN UNIVERSITIES

Correspondence Courses

Applications are invited from college/university teachers for admission to three **Correspondence Courses in Evaluation Methodology And Examinations** at Basic, Intermediate and Advanced levels of six months duration from 1-4-1984 to 30-9-84. **Basic level** course is offered from Regional Centres at Delhi, Bombay and Madras. A personal 'Contact Programme' for three days is planned and prescribed books will be supplied to every candidate.

Requests for prospectus and application forms accompanied by a crossed Indian Postal Order for Rs. 5/- drawn in favour of Secretary, Association of Indian Universities, and a self-addressed stamped envelope (Re. 1) should reach the undersigned. Last date for receipt of application in the prescribed form is **15th March, 1984** for non-sponsored candidates and **30th March, 1984** for sponsored candidates. For sponsored candidates, Universities/Institutions can pay the course fee and travel expenses for contact programme from UGC unassigned grant.

Project Director (Examinations)
Association of Indian Universities,
6 DDA Building, Nehru Place
New Delhi-110019

Indian Association for Educational Technology meets in Bhopal

The Indian Association for Educational Technology (IAET) held its 16th Annual Conference at the Technical Teachers Training Institute, Bhopal, from 14th-16th January, 1984. The theme of the Conference was "Distance Education in the Third World Countries." Papers were invited on the following aspects;

(1) Concept of Distance Education;
(2) Curriculum Designing for Distance Learning System;
(3) Distance Education System in India & abroad;
(4) Mass Media in Distance Education;
(5) Evaluation Techniques.

One hundred and eight participants from different institutes/universities participated. The conference was inaugurated by Dr. John S. Daniel, President of the International Council for Distance Education. In his presidential address he traced the history of Distance Education from the year 1969 when Open University was established in the United Kingdom. He further added that Open Universities are growing fastly in Asia. He quoted in this regard the experiences of China, Japan, Korea and the recently started Open University in India at Hyderabad. He quoted the Study done by Bates which showed that broadcasting had less impact while the conglomeration of different Media proved to be very effective. He concluded his address by saying that autonomous institutions offering distance education have done a good work compared to the other institutions which are under the grip of the parent organisations. Dr. G.B. Shah, President of IAET in his inaugural address stressed the need for introducing different technology suited to the local conditions. He underlined the need for taking urgent steps in this direction in the light of launching of INSAT-1B.

In the afternoon of 14th January 1984 two parallel sessions were held under the following heads:

Group I—Concepts, principles, procedure and effectiveness of distance education system.
Group II—Distance Education System in India & abroad.

Of the nine papers presented in Group I mention may be made of the paper entitled 'Cost Effectiveness of Distance-Learning System in Technical Education System" by Dr. V.S. Vaidya, Coordinator of TTTI's Extension Centre at Pune. The paper showed with facts and figures that the cost effectiveness of distance education was good. From among the six papers presented in Group II the paper by Mrs. Gomathimani entitled "Distance Learning Phenomenon—a Trend" argued that distance education run by commercial organisations were effective.

On 15th January, 1984 a symposium on "Educational Technology for Non-formal Education" was held in which Dr. Shah, Dr. S.S. Kulkarni, Dr. D.L. Nuttal of U.K. Open University and Mr. Pande from Doordarshan Delhi, participated. Mr. Pande during his talk said even though AIR/Doordarshan services were offered to the teaching community they did not utilise the opportunity fully. Dr. S.S. Kulkarni at this point suggested that the participants who can produce programmes for different media may be identified and a Register may be maintained by the Association. Dr. Nuttal briefly explained the programmes and the activities of U.K. Open University.

In the afternoon, two parallel sessions were held. They were : Group III—Mass-media in distance education system and Group IV—Case studies in distance education system. In Group III, there were altogether 8 papers and in Group-IV there were 7 papers. The paper entitled Role of INSAT in rural education by Dr. S.P. Malik was very informative. In Group IV Dr. N.K. Banthiya presented his paper entitled "Training for writing for distance education" in which he highlighted the various aspects of writing material for distance education. Mr. K. Gunasekaran, Research Officer, AIU presented the following two papers:

(1) Mass Media in Distance Education : Perspective and Problems; and
(2) A case for introducing innovations at the summative evaluation by the institutions offering distance education.

Mr. P.K. Malhan, Research Assistant, AIU presented a paper on 'Distance Education—A Perspective'.

On 16th January, 1984 there was a general session in which the reports from various groups were presented. The salient recommendations are: (1) The Institutes of Correspondence Education (ICE) should be given autonomous status. (2) Distance Education should be utilised to upgrade the professional growth of the teachers. (3) Appropriate mix of the media has to be followed in distance education. (4) Local need-based programmes had to be developed. (5) Training has to be given to the people interested to use different mass media. (6) Radio Television should be used effectively. (7) Formative and Summative Evaluation system have to be made more effective.

It was announced that the 17th Annual Conference of IAET will be held at Bombay and the theme of the conference will be 'Media Technology and Management of Learning'. Dr. S.S. Kulkarni of NIBM also informed that there will be a workshop at Bombay during this year to train people to produce programmes using different media.

Dr. Khoshoo Addresses Convocation of Poona University

Excerpts from the convocation address delivered by Dr. T.N. Khoshoo, Secretary to the Government of India, Department of Environment, at the University of Poona.

Convocation

“. . . Long ago, the Father of the Nation warned us that “Democracy comes naturally to him who is habituated normally to yield willing obedience to all laws, human or divine.....”. He said: “I value individual freedom but you must not forget that man is essentially a social being. He has risen to his present status by learning to adjust his individualism to the requirements of social progress..... Willing submission to social restraint for the sake of well-being of the whole society, enriches both the individual and the society of which one is a member”.

“A nation's social and political fabric depends entirely upon the respect it engenders for its constitutional framework and the laws of the land. However, unfortunately, even in the universities, the atmosphere is often surcharged with disregard and disrespect for law and order. Mercifully, it is only a handful who generally subscribe to this kind of approach. Yet, it is they who hold the society literally to ransom. The majority are like silent spectators, a matter of no comfort, for let us not forget that silence is half admission. Should such a situation be allowed to continue? Should the good elements in society be timid and leave the ground open for the unruly to rule the roost? These are basic questions which we all have to ask ourselves and seek solutions to in the larger interest of our society and the nation as a whole. The matter is simple. Do we succumb to the tendency for defiance of law when democratic channels are open to us? If we do not, we cannot realise the objectives of being “the high-protecting power of all knowledge of science, of fact and principle, of enquiry and discovery, of experiment and speculation”. We must have the courage of our convictions to face the situation frankly and squarely. It is high time that the silent majority faces the unruly in an orderly manner. On the eve of our independence, Prof. Eric Ashby describe the Indian universities as a “massive invalid” which does not respond to any simple treatment. It is you, my young friends, who have the biggest stake and the utmost responsibility to set things right. The basic question is, can we make tomorrow's India without involving today's youth?

“Importance of education in the progress of the country is clear from a Chinese proverb, which says:

> ‘If you are thinking one year ahead, plant rice;
> If you are thinking 10 years ahead, plant trees; and
> If you are thinking 100 years ahead, educate the people”.

“Let us follow this in whatever way we can as it will solve many of our problems of food, fuel, fodder, fertilizer and fibre, of environment and development, and above all of removing ignorance and irrationality. The role of education, higher education in particular, is to provide the high level of manpower for managing our country. This is a critical input to any worthwhile development and socio-economic change. If higher education is to fulfil this role, it has to be of the highest quality aimed at bringing about harmony and discipline in society as well as providing the professional and technical excellence needed for this purpose. One of the biggest dangers to our educational system is posed by influences extraneous to the university. Such influences must be kept under proper control and should, in no case, be allowed to have anything to do with the selection and promotion of faculty members. Let us realise that a wrong appointment in a university is bound to spoil generations of our students. The highest priority must be accorded to the quality of the faculty. After all, who makes discoveries or inventions, is it the individual or the university? Another disturbing trend is too much of inbreeding in most universities and in some it has reached alarming proportions. Youth needs proper guidance and channelisation of the latent energies along constructive and productive directions. Therefore, we need teachers of quality who can keep pace with the tremendous increase in the quantum of new knowledge and the added responsibilities towards the society as a whole. Given good teachers and students, good training and motivation will follow, thus helping the students in creative pursuits.

“It is well-known that in recent years there has been phenomenal, but wholly uncontrolled, growth in college and university education in our country. This has taken place mostly without due regard for qualitative improvement and provision of adequate opportunities for placement and absorption of trained manpower. Thus, while the percentage of literacy may have risen, not much has been achieved by way of quality of education. Mediocrity has set in and this will affect the whole fabric of our country. Unfortunately, whenever there are stresses and strains on our national economy, one of the first casualities has been the educational sector. Let us realise that expenditure on education is not expenditure but actually investment of the highest order. With the rapid expansion of the educational system, the resources have been spread too thinly and most of the support is at a sub-critical level. Such support is in effect counter-productive and has been so manifest.

"There is yet another facet. We talk of the autonomy of universities, but unless finances are guaranteed, true autonomy is not feasible. Besides, unfortunately, many unversities are more rule-ridden than even the Government. At the same time, autonomy does not mean licence or freedom to act irresponsibly.

"While rapid expansion in higher education has made it available to several sections of our society, which did not have such opportunity before independence, it has also increased unemployment. Even so, there is acute shortage of manpower in several fields of science, technology and management. At present, while for the job of a clerk, there are likely to be hundreds of applications, there may be none whatsoever for a technical position. Years ago, Swami Vivekanand had aptly remarked that our system was pre-eminently suited for a type of "clerk making education". It is obvious that education needs to be made truly relevant to the society. The system needs restructuring . When we do this, let us not forget our traditions, and our particular historical, cultural, religious, philosophical, social and economic milieu, and at the same time let us also not be oblivious to the fact that we are in a scientific and technical age. Furthermore, while Indian scholars compare very favourably with their counter-parts abroad, the significant difference in their functioning is seen in matters of fiscal inputs and coordination in the area of education and training. Unfortunately, coordination and collaboration are still not a part of the general scientific and educational scene, but wherever this has been possible in India, the results have been very impressive. We are supposed to have the third largest scientific and technical manpower in the world and at the same time we have the maximum adult illiteracy.

"We attained our political freedom, when many of you, who are graduating today, were not even born. But, please remember that India is still not free from want and hunger, from malnutrition and disease, from illiteracy and ignorance, from poverty and socio-economic inequality, and from lack of the basic amenities of life to which every citizen is entitled. It is my unshaken belief that the university system can be a source of great strength to the nation in overcoming all the difficulties and in providing impetus in economic development as also the restoration of our moral and spiritual values. You have before you the contribution of our scholars and the illustrious alumni of the universities, in building the present India. The university system can be the most powerful instrument in the upliftment of our country, as education is the bedrock of all progress and we have to do whatever we can to strengthen it. Universities need proper nurturing and their ailments should be cured expeditiously. Given this, they may play the role required for making scientific and technical progress from which will follow economic development as well as social order and national integration. The younger generation has a tremendous responsibility in this direction.

"It is human nature to view the past as glorious, the present as indifferent, and the future as bleak. While there may be cause for concern, there is no need for pessimism. One does get a mixed feeling, of anxiety as also of confidence. The anxiety as on account of the falling standards, while the confidence is born out of a realisation that all is not lost. The academic lights will never be out, they may be engulfed in a thick fog or mist. The change in weather is on the horizon, the sky will clear and with understanding, perseverance and discipline and a measure of sacrifice, the academic lights will again shine and bring glory to our country.

"Our country has been referred to variously—a land of contrasts, a functional anarchy, a country where centruties co-exist, and so on. The fact remains that we are at the cross roads. We have at one end of the spectrum the near stone age, and on the other the space age cultures, with everything in between. All these co-exist happily and go on side by side. This, I feel, is our great strength. This makes India relevant to the most underdeveloped as also to the most developed countries. Rarely in any country do we see such diversity as also opportunities and threats. Diversity is the strength of all living systems, and once lost, the system is on its way out. This has universal application. However, no Government can do everything by itself. The student community is an unutilized or under-utilized resource. The educational system, particularly the university students, can play an important role in harnessing public opinion. Students are also critical to our development and spread new ideas, new experiences by talking to their teachers, parents, brothers, sisters and friends, which has a multiplier effect. In fact, teaching and training, research and development, and extension, form a single package. Our universities generally concentrate on the first two items only and have done precious little about the extension of knowledge outside their campuses. Thus the fruits of knowledge remain away from the places where they are needed the most. It is most gratifying to note that Poona University has taken tangible steps in this direction, thanks to the forethought and vision of the university management.

"With these points in mind, I would now like to say a few words about the University Community and Eco-development Programmes. Eco-development aims at economic development in harmony with ecological balance and the betterment in the quality of life of our people. This approach calls for development without destruction through active public participation. The student community could be the major component of the work force which needs to be trained and geared to take Eco-development programmes based on "learning by doing". To create the necessary awareness among the students, the Sixth Five Year Plan envisaged active participation of the universities and scientific institutions in national development with a three-pronged strategy:

(1) Creating an awareness in the youth for conservation and enrichment of environmental assets through learning by doing. These programmes should be given proper academic recognition and credit thereby generating a new value system in educational programmes;

(2) University research programmes should increasingly come close to the local environmental problems; and

(3) Universities located in similar biogeographical provinces should participate in co-ordinated programmes of action-research.

"Eco-development programmes open up vast opportunities for employment generation for the youth provided that the following adjustments/modifications are incorporated in the existing university procedures and curricula:

(1) Due academic credit is given to Eco-development programme and field work; and

(2) Under this programme, there is a shift in research priorities with emphasis on *application* rather than on pure research.

"Involvement of non-university youth and the public at large in programmes of Eco-development can also be ensured by exploring the possibility of taking up eco-development programmes under the "Employment Guarantee Scheme". In Maharashtra, the tree plantation taken up during the Eco-development Camps held by university students is maintained and looked after during summer season by casual labour employed under the "Employment Guarantee Scheme". Constructive participation of students during holidays and survival of planted saplings during critical summer months through daily wage labour provides a good example of collaborative effort..." □

CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/ Seminar/Symposium/ Workshop	Objective	Name of Organising Department	Name of the Organising Secretary/ Officer to be contacted	Remarks (Chief Guest, Keynote lecturer, etc.)
March 9-10, 1984	Symposium on "Progress of Science and Technology in Uttar Pradesh	Exposing the Technological endeavour made in the State and its impact on Socio-economic Development.	U.P. Council of Science & Technology and the University of Roorkee.	Dean, Research & Industrial Liaison	Symposium likely to be inaugurated by Shri Sripat Mishra, Chief Minister, U.P.
March 5-9, 1984	International Symposium on "New Vistas in Organometallic Chemistry"	To focus the recent developments in the area of Organometallic Chemistry in form of Plenary lectures, Research paper presentation and to discuss and identify the thrust area in Organometallics particularly in the national perspective.	Chemistry Department, University of Rajasthan, Jaipur.	Prof. R.C. Mehrotra, Chemistry Department, University of Rajasthan, Jaipur.	19 outstanding Organometallic Chemists of the world are participating in the symposium.
March 9-11, 1984	Seminar on Commonwealth Literature	To focus attention on the major genres and themes in Commonwealth Literature	Department of English, Marathwada University, Aurangabad.	Dr V.R.N. Prasad, Reader in English Marathwada University.	Senior teachers of English and research scholars are expected to participate.

Madras University organises workshop on minimal examination reforms and restructuring of courses

The University of Madras that pioneered introduction of several major areas of examination reforms like Internal Assessment, Semester System, Grading and Question Banking over the years had to give up Internal Assessment and Semester System due to pressure from teachers and students. Now the university is keen keen to implement minimal examination reforms in the areas of restructuring the syllabi, introduction of changes in paper setting, pattern of question papers and changes in the conduct stage of examinations. A 3-day workshop to consider all these issues was held between 9th and 13th February, 1984 which was attended by Chairmen and Members of Boards of Studies in Sciences and Medicine, Boards of Examiners, Members of the Syndicate, Principals of colleges and senior teachers of the university and affiliated colleges.

Inaugurating the workshop, Dr. P. Thirugnansambandam, Director of Collegiate Education, reiterated that the syllabus in universities was grandiose and impressive on paper but lacked clarity and completeness. He also called for teachers and students to make better use of library facilities. Dr. S.P. Shanmuganathan, Dean, College Development Council welcoming the participants suggested that the group must consider seriously all the issues related to pre-conduct, conduct and post-conduct stages of examinations and make specific recommendations to university authorities to implement them. Prof. V. Natarajan, Project Director of AIU pointing out that the minimal examination reform outlined first by the Mahabaleshwar Conference (1980) when all Examination Reform Unit Universities for the first time gathered to exchange their experiences, outlined practical guidelines for implementation of several areas of examination reforms suggested by UGC.

There were in all nine sessions, each session devoted to either presentation of papers or discussion in groups to consider specific issues. In the first session, Prof. Natarajan presented the theme to get the workshop to business by, elaborating on minimal reform programme of Mahabaleshwar and UGC documents. There were papers dealing with restructuring the syllabus, the need for establishing curriculum development cell, paper setting and other activities of the pre-conduct stage, issues related to conduct stage of examinations and finally, issues related to post-conduct stages. In all nearly 20 papers were presented which provided the background information for different groups to discuss them and come up with specific recommendations. There were four groups dealing with curriculum development and syllabus restructuring, pre-conduct stage, conduct stage and post-conduct stage of examinations.

After thorough deliberations several recommendations have been made : Some of the recommendations are :

(1) establishment of a curriculum development cell at the university to coordinate the work of curriculum development in different disciplines in a few select colleges with the help of Task Forces in each subject;

(2) to develop restructured courses in the form of foundation, core, allied and application oriented subjects suggested by Task Forces and framed by respective Boards of Studies;

(3) to prepare 3 sets of papers in every subject by a team of paper setters who will have recent teaching experience in these subjects. The Board of papersetters also will moderate the question papers before their choice;

(4) to prepare formats for registration of candidates for examinations for the consolidation in the examination section and finally, allocation to different examination centres;

(5) to take steps in the form of statutes to make unfairmeans in examinations a recognisable offence and to give effect to the schedule of punishment for different types of unfairmeans as formulated by the Syndicate from time to time;

(6) to continue to adopt central evaluation to speed up the process of marking and announcement of results;

(7) to initiate studies on reliability and validity of these examinations from an analysis of the performance of candidates;

(8) to continue the re-evaluation as adopted now in the university and also incorporating various provisions of the report on re-evaluation accepted by all universities during the 59th Annual Conference of AIU at Annamalainagar.

It was decided to circulate the entire proceedings of the workshop and the recommendations made to all the affiliated colleges to enable them to discuss thoroughly and suggest modifications if necessary. Once this is done, the university authorities will implement them within 2 years.

Annual conference of Nagpur and Amravati Universities English teachers' association

The Annual Conference of the English Teachers of Nagpur and Amravati Universities was recently held at Sardar Patel College, Chandrapur, Maharashtra. The President of the Association, Dr. O.P. Bhatnagar of Vidarbha Mahavidyalaya, Amravati, projected the activities of the Association in the rural areas to fill the gap that exists between the rural and urban performance and efficiency in English. In his presidential speech, Dr. Bhatnagar asserted that if English is to stay it will have to be taken care of more in villages than in the towns. And as such the teacher of English will have to work outside the classroom as part of the social extension of his subject in a purposeful demonstration of the relevance of English for the masses. In his speech he decried the present elitist modes of the College and University Teachers of English in regarding themselves as a class by themselves attending seminars and conferences in five star conditions in India and abroad to the utter neglect of their national commitment to masses. English, he held, was a very vital area of operation and technique in uplifting the rural mind and modes to suit the modern times, and as such it requires great devotion on the part of the teachers of English to strengthen it in the rural areas. He, therefore, exhorted the teachers of English to work on summer-orientation programmes on a voluntary basis, amply demonstrated by the Association by its activities during 1983-84.

The Conference was inaugurated by Dr. K. G. Deshmukh, Vice Chancellor, Amravati University, with Dr. G.B. Kadam, Vice-Chancellor, Nagpur University, presiding over the inaugural function. The Conference was hosted by the courtesy of Shri Shantaramji Potdukhe, Member of Parliament, at Chandrapur, and attended by a large number of social, educational and political dignitaries. The general keynote address was delivered by the former Reader in English and leading Marathi critic Prof. P.W. Urdhwareshe of Pune and the academic keynote address was delivered by Dr. S.M. Pandeya, Professor of English, Banaras Hindu University, Varanasi.

The general sessions were followed by Paper Reading Sessions and Group Discussions on Syllabi and Courses in English in the region. An exclusive session on the recitation of poems by the practising posts was also organised, including students participation in it. Both students and teachers received various prizes and were felicitated for their performance in English. It is for the first time that the students securing the highest number of marks in English at all the levels of University Examinations were felicitated by a teacher organisation. A blind student, G.W. Lade, received a prize for successfully completing his M.A. in English in Second Division. Awards were distributed to teachers under various heads like—Best Paper Award, Active English Teacher Award, Active Association Member Award, Two Best Poems Awards and Two Best Short Stories Awards.

Marathwada University's international conference on biology of benthic marine organisms

An International Conference on Biology of Benthic Marine Organisms was organized by the Zoology Department of Marathwada University, Aurangabad from 20 to 24 January 1984. As many as 50 papers were presented at 6 sessions devoted to Physiology (7); Endocrinology (5); Productivity (6); Ecology (16); Mariculture (5) and Pollution and Biofouling (12). Amongst the contributors were scientists mainly from India (60), U.S.A. (40) and 15 scientists from other countries such as Pakistan, United Kingdom, Brazil and Venezuela.

Hon'ble Union Minister for Science and Technology and Ocean Development, Mr. Shivraj Patil delivered the inaugural address for the conference and Dr. S.Z. Qasim, Secretary, Department of Ocean Development, delivered the Keynote address mentioning the prospects and importance of investigations on the benthic marine organisms, which are potential sources of food for man. Dr. C.V. Kurian of University of Cochin, in his address, dealt in detail, the research work going on in various Institutes along the coastal regions of India on Benthic marine organisms. He also added the importance of these organisms in the food chain of marine environment.

This International conference was organized jointly by American Institute of Biological Sciences (AIBS) and Office of Naval Research (ONR) Washington, from U.S.A., Zoology Department, Marathwada University, University Grants Commission (UGC) and Department of Ocean Development, India. Prof. R. Nagabhushanam, Marathwada University and Dr. B.J. Zahuranec, Office of Naval Research, Washington were the Chairpersons for the conference. Prof. Nagabhushanam welcomed the participants and narrated, in brief, the aims of the conference. Dr. Zahuranec, ONR, Washington, mentioned about ONR joint projects with Indian Universities and C.S.I.R. Laboratories for future research activities.

The deliberations which took place through different sessions on various topics gave information regarding the physiology, endocrinology and ecology of benthic organisms and their importance in mariculture. Discussions on each paper shed light on novel technologies which can be applied universally in studying the benthic organisms of both tropical and temperate environments.

The concluding session of this conference was held on 24 January 1984 and was presided by Dr. S.A. Meer, Counsellor for Science and Research, American Embassy, New Delhi.

Seminar on accountancy at B.J. Commerce College

A six-day seminar of teachers of Accountancy in Gujarat was organised at B.J. Commerce College, Vallabh Vidyanagar under the COHSSIP programme of U.G.C. Current topics like Accounting standards, Inflation Accounting, Criticism of Published Accounts, Responsibility Accounts, Marginal Costing, Integrated Accounting

Systems and Teaching Techniques etc., were deliberated by the faculty.

42 delegates participated in this seminar who came from different universities of Gujarat.

Gurukula Syndicate meets at Delhi

A meeting of the Syndicate of Gurukula Kangri University was held in New Delhi on 11-2-1984 under the presidentship of Sri G.B.K. Hooja, the Vice-Chancellor of the University. At first the two new members, Professor R.L. Parikh, Vice-Chancellor, Gujarat Vidyapith and Shri R.S. Chitkara were welcomed.

The Syndicate accepted the promotion scheme as formulated by the U.G.C. The following important decisions were taken by the Syndicate:

(1) To celebrate the Platinum Jubilee of the University in 1984.

(2) Full development of Gurukula Kangri Village will be made under the 20-point programme of the Prime Minister Smt. Indira Gandhi.

(3) Starting of a Certificate/Diploma course in Tamil language.

(4) Approval for 30 Centres of Adult Education.

More staff quarters at Karnatak University

Hon'ble Sir S.R. Bommai, Minister for Industries, Government of Karnataka laid the foundation stone of the Staff Quarters on the Karnatak College as well as the University Campus on 26th Jan. The University has, with the assistance of the H.D.F.C., taken up the construction of sixty additional staff quarters. He addressed the students and staff of the University later. In a frank and forthright speech, Sir Bommai analysed the situation in the Universities to-day and felt that Universities should enjoy autonomy. He said that the Universities should primarily attend to developing an attitude of rational and fearless thinking on the part of the students. This would lead to the creation of a strong public opinion which would, among other things, help cleanse the present corrupt political atmosphere, he said.

Dr. Nanjundappa, Vice-Chancellor, who presided, welcomed the guest earlier and listed the achievements of the University.

American Centre gifts books to Karnatak University Library

Some 150 recently published books worth around Rs. 30,000/- on a variety of topics were gifted to the Karnatak University Library by the American Centre, Madras, on 8 February. The books, which were formally handed over by Ms. Patricia Norman, Vice-Consul, had been exhibited earlier under the theme 'Scholarly Publishing in America'. Dr. D. M. Nanjundappa, who received the books on behalf of the University, said that this gesture of goodwill, especially in the sharing of knowledge, is yet another proof of mutual respect between the two countries. Ms. Norman expressed great pleasure at the spontaneous affection the people of Karnataka showed towards the people of the United State.

UGC Official Dead

Shri A.B. Gupta, Deputy Secretary, University Grants Commission died on February 23, 1984. He was suffering from acute lukemia for the last two years.

Keeping in view the wishes of Late Shri Gupta, his eyes and body have been handed over to the All India Institute of Medical Sciences, New Delhi for medical use.

News from Agril. Varsities

Seminar on agricultural resources and crop production

Dr. A.S. Atwal, Dean of Postgraduate Studies and Director of Ecology, Forestry, Agro-meteorology and Plant Protection of the Punjab Agricultural University, inaugurating a two-day seminar on agricultural resources and crop production at the PAU recently, said that food production was to be increased considerably to feed the rapidly increasing population of the country. This would need more land under cultivation, more resources to be harnessed and more inputs to be applied.

Sponsored by the Indian Council of Social Science Research, the seminar was attended by more than 100 delegates from Punjab, Haryana, Himachal Pradesh and Jammu & Kashmir.

Dr. Atwal said that the soil fertility should be maintained since the soil was getting deficient of micronutrients. Proper management of land and water resources should be practised and the problem of water logging should be solved by planting suitable type of trees and organising a drainage system.

In his welcome address Dr Mavi, Head of the Department of Agro-meteorology of the PAU explained the objectives of the seminar and said that the potential and conservation of land, soil, water, climate resources and the strategies for the utilisation in optimising crop production would be discussed. Dr. Mavi said that apart from an increase in reckless exploitation of underground water resources, the efficiency of water use of both underground and surface water was low. He deplored that vast stretches of land had been rendered unproductive because of salinity, acidity, water logging and soil erosion.

Dr. G.S. Gill, Dean of the College of Agriculture, in his presidential remarks suggested that such seminar should be held at state and national level and specific recommendations made to the State and Union Government.

National conference of the Indian Phytopathology Society at HAU

It is imperative that plant pathologists should adopt an integrated approach in treating various virus and other diseases in different crops, said Mr. L.D. Kataria, Vice-Chancellor, Haryana Agricultural University (HAU), while delivering the Chairman's address at the inauguration of the 36th National Conference of the Indian Phytopathology Society organised at HAU recently.

Mr. Kataria exhorted the scientists to avoid "compartmentalisation" in treatment of plant diseases and to suggest treatments which are economically viable. He said that plant pathology had acquired greater importance because the high yielding varieties are more susceptible to the diseases, both old and new.

Dr. J.N. Chand, the Chairman of the organising committee disclosed that the theme-subject of the meet will be chemical control of plant diseases.

Dr. K.D. Paharia, Plant Protection Advisor to the Govt. of India, inaugurated the conference.

250 scientists from all over the country participated in the 3-day conference.

Symposium on Chlamydiosis

"The research methodology evolved by veterinarians for the treatment of different animals should be need based and location specific", said Shri L.D. Kataria, Vice-Chancellor, Haryana Agricultural University (HAU) while addressing the first National Symposium on Chlamydiosis which is a common problem amongst animals and men. Shri Kataria said that it was necessary for the extension centres to work more aggressively for making the research achievements available and applicable to the ordinary farmers because the small, marginal and landless farmers' economy depended primarily on his livestock wealth.

Dr. R.M. Acharya, Deputy Director General, Animal Sciences (ICAR) who inaugurated the seminar said that chlamydial infections were assuring the status of an important and emerging disease both among animals and men. The causal agent is responsible for multiple clinical syndromes such as pneumonia, polyarthritis, encephalitis, besides other conditions in domestic animals and trachoma and abortions in humans.

The symposium in which about 55 specialists from all over the country participated was the first of its kind in the country and was organised under the auspices of the University Grants Commission (UGC).

Trials with new phosphate fertilizer

Pasture experiments carried out in Australia show that a new type of phosphate fertiliser, based on Queensland rock phosphate, holds promise.

The Victorian Department of Agriculture has been conducting preliminary assessment of this experimental fertilizer, produced by a new process developed by the CSIRO for Queensland Phosphate Ltd. Trials have also been conducted in Queensland and in the Australian Capital Territory.

The new material, known as dical-super, contains phosphorous that is citrate-soluble, instead of the water-soluble phosphorus in superphosphate. Dical-super contains more phosphorous and less sulphur than superphosphate.

The department's senior pasture specialist stated that when dical-super and superphosphate were applied to pots of phosphate-deficient soil at equal rates of phosphate, the response of sub-clover to the dical-super was equal to or better than the response to superphosphate.

Research in the department's laboratory found that dical-super did not have the harmful effect that superphosphate had on inoculated clover seed.

'When the new fertilizer process is developed to pilot-plant stage, the product wiel be assessed more comprehensively in paddock trials, it was stated.

Sports News

- Two Hockey players S/Shri Balbir Singh and Balwinder Singh have been selected by the Indian Hockey Federation for the Senior National Hockey Coaching Camp to be conducted at New Delhi in preparation for the coming Olympic Games.
- A Seminar of Non-aligned countries on Sports is being held in India at the National Sports Institute, Patiala from 5th to 18th March, 1984. Delegation from about 40 Non-Aligned countries are likely to participate in the Seminar. It will discuss various aspects of cooperation between the Non-Aligned countries in the field of Sports.
- The Canadian Women's Field Hockey Association has been selected to host the 1986 World Cup. It will take place in Vancouver (29th June-12th July, 1986).
- The Xth Asian Games are proposed to be held from 3rd to 18th October, 1986 at Seoul.
- The Indian Airlines Hockey Team has won the Senior National Hockey Championship which recently concluded at the National Stadium in New Delhi.

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BY

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Advocate

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19. Salary, Pension, Provident Fund, etc.; 20. Compulsory Retirement and Superannuation Age; 21. Leave; 22. Promotion of Educational Staff; 23. Termination of Services of Educational Staff; 24. Reversion, Resignation, Reinstatement and Suspension; 25. Writ Jurisdiction; 26. Natural Justice; 27. Appeal & Revision; 28. Offences & Penalties; 29. Law of Taxation relating to Educational Institutions.

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RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

SOCIAL SCIENCES

Sociology

1. Dhanagar, Siddapa Nayapa. *Mendhe dhangars in Kolhapur District : A sociological study.* Shivaji U, Kolhapur. Dr. A.D. Madgulkar.

2. Mishra, Surat. *Offences against women in Delhi.* HS Gour, Sagar. Prof. D.P. Jatar and Prof. M.Z. Khan.

3. Parihar, Madan Singh. *Jan jatiya vikas : Niti evam prayatnon ka tathyatmak vishleshan.* HS Gour, Sagar. Dr. N.K. Gureha.

4. Rana, Bhanu Shamsher Jang Bahadur. *Habitual offenders.* HS Gour, Sagar. Dr. S.C. Tewari.

5. Shrivastava, Himanshu Ram. *Antrajateeya vivah: Ek samaj shastriya adhyayan.* HS Gour, Sagar. Dr. N.K. Gureha.

6. Singh, Chander Bhan. *System of administration and decision making : A study of organisation and functioning of government offices at the Commissionery level.* HS Gour, Sagar. Dr. N.K. Gureha.

7. Singh, Dinesh Pratap. *Ek nav sthapit gram: Punravas evam samajik vyavastha ka adhyayan.* HS Gour, Sagar. Dr. N.K. Gureha.

Social Anthropology

1. Babu, K.S. *Population study.* U Delhi. Dr. M.K. Bhasin.

Political Science

1. Jones, Shrisunder Alisha. *Problem of political assimilation of Indian immigrants in United Kingdom: A Study.* Shivaji U, Kolhapur. Dr. B.A. Katikar.

2. Patil, Subhash Jingonda. *Local patterns of rural politics in Maharashtra: A study of politics of co-operative and Panchayati Raj Institutions in Sangli District.* Shivaji U, Kolhapur. Dr. V.B. Auti.

Economics

1. Aher, Bhalchandra Motiram. *Economics of grape cultivation in Niphad Taluka.* Shivaji U, Kolhapur. Dr. V.B. Ghuge.

2. Chalke, Sandhya Ulhas. *Causal analysis of changes in labour force participation rates in India with special reference to Maharashtra.* Shivaji U, Kolhapur. Dr. J.P. Patil.

3. Hanje, Rajamati Bapusaheb. *Acharya Somadev Suri's thought on political economy.* Shivaji U, Kolhapur. Dr. J.F. Patil.

4. Salve, Waman Nimbaji. *A Socio-economic study of seasonal migrants in co-operative sugar factories with special reference to Kolhapur District.* Shivaji U, Kolhapur. Dr. (Smt.) L.R. Patil.

5. Srivastava, Madan Gopal. *Regional banks and economic development : A case study of Sangli Bank.* Shivaji U, Kolhapur. Dr. V.B. Ghuge.

6. Suryavanshi, Maruti Hari. *Working of the Industrial Development Bank of India,* 1964-1984. Shivaji U, Kolhapur. Dr. (Smt.) S.B. Pandit.

Law

1. Geethakumari, S. *Consumer protection and legal control in Kerala.* U Ker, Trivandrum. Prof. R. Sankaradasan Thampi.

2. Vijayan, R. *Judicial control of administrative discretion.* U Ker, Trivandrum. Dr. K. Parameswaran.

Education

1. Buddhisagar, Meena. *Development and comparison of instructional material developed by using advance organizer model and operant conditioning model for teaching educational psychology to B.Ed. students.* Devi Ahilya, Indore. Dr. D.N. Sansanwal.

2. Chitle, Vijaya. *Family interaction and psycho-social development among school-going children of Sagar Division.* H S Gour, Sagar. Dr. (Mrs.) L. Mishra.

3. Diwakar, Pramila. *Mansik drishti se prakhar aur mand balkon kee pehchan aur samsyaen.* H S Gour, Sagar. Dr. S.P. Ahluwalia.

4. Dubey, Archna. *Effectiveness of a training strategy for developing feedback giving and feedback receiving competence in relation to the selected organismic variables of student teachers.* Devi Ahilya, Indore. Dr. B.K. Passi.

5. Jain, Malti. *Antramukhi vhirmukhi balak evam balikaon kee budhi evam atm-sambodh ka tulnatmak adhyayan.* HS Gour, Sagar. Dr. S.P. Ahluwalia.

6. Jain, Sushma. *Madhya Pradesh aur Rajasthan mein praudh shiksha karyakram evam samasyaen.* H S Gour, Sagar. Dr. S.P. Ahluwalia.

7. Joshi, Sadhana. *Gandhi shiksha darshan ke anurup shikshak nirman.* Devi Ahilya, Indore. Dr. B.K. Passi.

8. Pandey, Anil Kumar. *Personal problems and social attitudes of primary and secondary school teachers working in tribal and non-tribal areas of Madhya Pradesh.* HS Gour, Sagar. Dr. (Mrs.) L. Mishra.

9. Sharma, Sunita. *Shiksha mein dwandhatmakta: Ek adhyayan.* Devi Ahilya, Indore. Dr. R.C. Hooda.

10. Sharma, Vibha. *Developing training strategy for science teaching by using concept attainment model.* Devi Ahilya, Indore. Dr. B.K. Passi.

11. Verma, M.S. *Construction of a diagnostic test in chemistry and preparation of remedial measures.* Devi Ahilya, Indore. Dr. P.C. Katiyar.

Commerce

1. Chaube, Rajiv. *State Bank of India dwara krishi ka vitt poshan.* H S Gour, Sagar. Dr. B.K. Jain.

2. Chaudhry, Varsha. *Inflation and middle class family budgets : A case study of Hoshangabad Division.* H S Gour, Sagar. Shri R.N. Mukherjee.

3. Jain, Sheetal Chand. *Madhya Pradesh mein gramodyog ka vikas.* H S Gour, Sagar. Dr. B.K. Jain.

4. Parihar, Rajasingh. *Sagar sambhag ke grameen arthik vikas mein chitrit grameen vikas karyakram kee bhoomika.* H S Gour, Sagar. Dr. O.P. Mishra.

5. Soji, Omowole Jones. *India's trade and economic relation with selected African countries.* HS Gour, Sagar. Dr. A.S. Chouhan.

6. Umahiya, Krishan Kumar. *Problems of agricultural development with special reference to Sagar Division.* HS Gour, Sagar. Dr. O.P. Mishra.

7. Vakhle, Sudheer. *Madhya Pradesh mein poultary farming udyog: Iski samasyaen evam vikas kee sambhavnaon ka ek adhyayan.* H S Gour, Sagar. Dr. O.P. Mishra.

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1. Manda Rao, Narasimha. *The concept of prana in Indian Philosophy with special reference to Upanishads and Patanjali Yog Sutras.* Shivaji U, Kolhapur. Dr. S.M. Dixit.

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Sanskrit

1. Akolkar, Archana Ashok. *Sanskrit kavya sadhna mein bhakt kavi Pandit Mayurpant ka yogdan.* Devi Ahilya, Indore. Dr. H.R. Dholkia.

2. Awasthi, Bhagwat Dayal. *Shrimad Bhagwat tritiya skandhgat Kapil Gita ka alochnatmak adhyayan.* Kanpur U. Dr. Mahendra Kumar Verma.

3. Budhouliya, Saryu Prasad. *Hari Bhadra Suri krit samraichch katha ka sanskritik adhyayan.* Kanpur U. Dr. Govind Narayan Malviya.

4. Dube, Ved Bhaskar. *Mushundi Ramayan aur Shrimad Bhagwat ke dasham skandh ka tulnatmak adhyayan.* Kanpur U. Dr. Mahendra Kumar Vidyarthi.

5. Gupta, Pushpa Devi. *Acharya Utpal Dev rachit Shiv Satambhon ka sahityak evam darshnik adhyayan.* Kanpur U. Dr. K.K. Tripathi.

6. Inderjit Kaur. *Sanskrit kavya mein sat darshan prampara: Ek shastriya tatha tulnatmak adhyayan.* Kanpur U. Dr. Vishambhar Nath Dwivedi.

7. Mathur, Rekha. *Dropadi per adharit natya evam kavya kritiyon ka sahityik evam sanskritik mulyankan.* Kanpur U. Dr. Sharda Seth.

8. Mishra, Abha. *Nagarjan ka madhyamik evam Shankar ke sharirak bhashya ke tulnatmak adhyayan ke adhar per Samayvad tatha Advaitavad: Ek sameeksha.* Kanpur U. Dr. Subhadra Tripathi.

9. Mishra, Bhudev Prasad. *Beesvin shati ke sanskrit ke itihasik mahakavya: Ek adhyayan.* Kanpur U. Dr. Kailash Nath Dwivedi.

10. Pandey, Nirmala. *Kavivar Shri Brhamnand Shukla krit Shri Nehru Chritam Mahakavya ka alochnatmak adhyayan.* Kanpur U. Dr. Babu Ram Pandey.

11. Parwar, Pushpa. *Kalidas tatha Bhavbhuti ke nari patron ka tulnatmak adhyayan.* Kanpur U. Dr. Kailash Nath Dwivedi.

12. Rai, Madhuri. *Kalidasottar natya prampara kee vividh pravritiyon ka tulnatmak adhyayan.* Kanpur U. Dr. Krishan Kant Tripathi.

13. Saugar, Lalita. *Sanskrit Manika sahitya tatha Rup Goswami krit Dankeli Komedi: Ek samalochanatmak adhyayan.* Kanpur U. Dr. Ashok Kumar Walia.

14. Sharma, Sarva Mangala. *Shri Samraj Dixit kee sanskrit rachnaon ka sameekshatmak adhyayan.* Devi Ahilya, Indore. Dr. H.R. Dholkia.

15. Shrivastava, Nirmala. *Puranon ke adhar par Cotna Gokarn Nath Tirath ka anusheelan.* Kanpur U. Dr. Shri Ram Singh.

16. Shukla, Dayanand. *Ashwa Ghosh ke kavyon ka darshnik adhyayan.* Kanpur U. Dr. Dev Narayan Mishra.

17. Shukla, Kaushal Kishore. *Amritanand Yogikrit Alankar Sangrah: Ek tulnatmak adhyayan.* Kanpur U. Dr. Om Prakash Chauhan.

18. Shukla, Sandhya. *Acharaya Dharam Kirti aur Bhartiya Darshan mein unka yogdan.* Kanpur U. Dr. K.S. Awasthi.

19. Shukla, Santosh Kumar. *Sanskrit vangmaya mein Ganga.* Kanpur U. Dr. Subhadra Tripathi.

20. Shukla, Sneh Lata. *Kavivar Shri Harit Matva virchit Vikrant Korvam natak ka natya shastriya evam sahityik adhyayan .* Kanpur U. Dr. Babu Ram Pandey.

21. Singh, Pratibha. *Vadi Nagishwar krit Man Manohar: Ek alochnatmak adhyayan.* Kanpur U. Dr. Daya Shankar Chaturvedi.

22. Tiwari, Jagdish Narayan. *Natakkar Harihar : Ek adhyayan.* Kanpur U. Dr. Kailash Nath Dwivedi.

23. Tiwari, Kailashnath. *Atharvaveda mein sanskritik tatvon ka adhyayan.* Kanpur U. Dr. Vishnu Dev Sharma.

24. Tiwari, Ranjan. *Sanskrit sahitya mein nirupit guru shishya prampara : Ek adhyayan.* Kanpur U. Dr.Kailash Nath Dwivedi.

25. Tripathi, Mangal Datt. *Sanskrit sahitya mein poorvrag: Shringar sidhant aur prayog.* Kanpur U. Dr. Daya Shankar Chaturvedi.

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27. Vajpai, Prabha. *Aetren Brahman ka sanskritik drishti se adhyayan.* Kanpur U. Dr. Amaldhari Singh.

28. Vajpai, Pushp Prabha. *Chandralok : Alankar shastriya adhyayan.* Kanpur U. Dr. Amaldhari Singh.

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2. Chotane, Seema Jayant. *Naresh Mehta : Samagra mulyankan.* Shivaji U, Kolhapur. Dr. V.K. Ghate.

3. Desai, Raghunatha Ganpati. *Swatantrayottar hindi aur anchlik upanyason ka samajshastriya adhyayan.* Shivaji U, Kolhapur. Dr. S.G. Gokakakar.

4. Dube, Vinod Kumar. *Adhunik hindi natkon,* 1950 *se* 1980 *tak mein parivartanman jeevan mulyon kee abhivyanjana.* Kanpur U. Dr. Dharamdhwaj Tripathi.

5. Govande, Ramesh Laxman. *Nirala ke kavya mein prayukt pramukh adyabimbon ka anusheelan.* Shivaji U, Kolhapur. Dr. G.R. Kulkarni.

6. Gupta, Rajni. *Nirala kee lambi kavitaen: Sanrachnatmak adhyayan.* Kanpur U. Dr. Suman Raje.

7. Gupta, Shashi Kanta. *Premchand evam Bhagwati Charan Varma ka samaj shastriya evam tulnatmak adhyayan.* Kanpur U. Shri Sewak Vatsyayan.

8. Hasamnis, Madhukar Shriniwas. *Dr. Shankar Shesh ke natakon ka anusheelan.* Shivaji U, Kolhapur. Dr. G.R.

9. Hauri Lal. *Kalidas aur Tulsidas ka upman vidhan: Ek tulnatmak adhyayan.* Kanpur U. Dr. Ganesh Dutt Saraswat.

10. Jadhav, Balwant Sadhu. *Dalit characters in Premchand's novels and short stories.* Shivaji U, Kolhapur. Dr. S.P. Mishra.

11. Jain, Manju. *Hindi upanyas kee pragati mein Bhagwati Charan Varma ka yogdan.* Kanpur U. Dr. Suman Raje.

12. Katti, Shrikant Raghunath. *Madhyayugeen itihas per adharit hindi natakon mein sanskritik chitran, isvi 700 se 1800 tak.* Shivaji U, Kolhapur. Dr. G.R. Kulkarni.

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14. Mandwi, Mani. *Hindi itihasik vir kavyon kee prampra mein Chchtra Prakash ka kavya shastriya evam sanskritik anusheelan.* Kanpur U. Dr. Kailash Nath Gaur.

15. Mishra, Jayant Prasad. *Kathakar Fanishvar Nath Renu: Jeevan darshan aur sahitya.* Kanpur U. Dr. Lalta Prasad Dube.

16. Mishra, Kanta. *Sathottari hindi upanyason mein sankraman sheel samajik mulyon ka anusheelan.* Kanpur U. Dr. Laxmi Kant Pandey.

17. Nigam, Punya Sudha. *Madhyayugeen evam adhunik kalden Krishan kavya kee pravritiyon ka tulnatmak adhyayan.* Kanpur U. Dr. Bal Mukund Gupta.

18. Palvidkar, Alaknanda. *Madhyayugeen Sant Swami Haridas evam unke samparduya ka Bharatiya sangeet ko yogdan.* HS Gour, Sagar. Prof. B.N. Sharma.

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22. Saxena, Kamla. *Sant sahitya per Vedant ka prabhav: Ek anusheelan.* Kanpur U. Dr. Lalita Mishra.

23. Sharma, Asha Kiran. *Bhagwati Prasad Vajpai ke upanyason mein lok dharam aur puna chetna.* Kanpur U. Dr. R.J. Singh.

24. Sharma, Sumedha. *Jai Shankar Prasad ke natya sahitya mein antradwandh ke swarup ka anusheelan.* Kanpur U. Dr. Bal Mukund Gupta.

25. Shrivastava, Shashi Bala. *Dutt Dwijendra: Jeewan aur sahitya.* Kanpur U. Dr. Ganesh Dutt Saraswat.

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27. Shukla, Veena. *Ram Vinod Mahakavya ka shaudh parak anusheelan.* Kanpur U. Dr. Vidya Chauhan.

28. Siddiqui, Sher Ahmad. *Hindi gazal ka sahityik anusheelan.* Kanpur U. Dr. Dharamdhwaj Tripathi.

29. Singh, Jaya. *Bhartendu evam Dwivedi yugeen bhasha chintan ke sandarbh mein Pandit Govind Narayan Mishra ke vyaktitva evam krititva ka alochnatmak anusheelan.* Kanpur U. Dr. Bal Mukund Gupta.

30. Singh, Ram Kishore. *Nai kahani mein parivartan man jeevan mulyon kee abhivyanjana.* Kanpur U. Dr. Shambu Nath Dwivedi.

31. Singh, Ram Yagya. *Adhunik hindi prabandh kavyon mein Ram virodhi patron ka chritra chitran.* Kanpur U. Dr. Laxmi Kant Pandey.

32. Singh, Upender Bahadur. *Nirala sahitya kee vaicharik prishtbhumi ka anusheelan.* Kanpur U. Dr. Saryu Prasad Aggarwal.

33. Singhal, Braj Bala. *Hindi ke pramukh upanyason mein vichchin dampatya ka nirupan.* Kanpur U. Dr. Vidya Chauhan.

34. Sonone, Vasant Rao. *Bharat aur Soviet Sangh ke madhya anta sanskritik, sahityik sambandhon ke anusheelan: Hindi sahitya ke pariprekshya mein.* Devi Ahilya, Indore. Dr. (Kum.) C.K. Rahine.

35. Swan, Shashi Devi. *Adhunik kavitriyon ke geeti kavya ka anusheelan.* Kanpur U. Dr. Satendra Tewari.

36. Thakar, Alka Vasudeo. *Manavtavad ke pariprekshya mein Acharya Hazari Prasad Dwivedi ke sahitya ka anusheelan.* Shivaji U, Kolhapur. Dr. G.S. Surve.

37. Tiwari, Ram Phal. *Ram Swarup Mishra aur Dwarika Prasad Mishra ke Krishnayan ka tulnatmak adhyayan.* Kanpur U. Dr. Ramendar Pandey.

38. Tripathi, Hari Om. *Kanaujee lok geetaon mein rashtriya bhavna evam niti tatwa.* Kanpur U. Dr. Vansh Gopal Tripathi.

39. Tripathi, Satish Chander. *Sathottari hindi kavya dhara mein parivartanman jeevan mulya aur unki prasangikta ka parisheelan.* Kanpur U. Dr. Ajay Prakash.

40. Trivedi, Madhuri. *Lok natya prampara : Samajik sanskritik prishthbhumi.* Kanpur U. Dr. Lalita Mishra.

41. Vajpai, Rajni. *Bhagwati Charan Varma ka Hindi natya evan kavya sahitya mein yogdan.* Kanpur U. Dr. Sudha Rani Pandey.

42. Vijay Laxmi. *Chacha Vrindavan Das : Sahitya ka lok tatwik adhyayan.* Kanpur U. Dr. Laxmi Kant Pandey.

43. Yadav, Abha. *Premchand ke upanyas sahitya ka samaj shastriya anusheelan.* Kanpur U. Dr. Jagdish Prasad Agnihotri.

Marathi

1. Bhosale, Vinayak Shankar. *Rajkeeya kshetra teel lekhkanche swatantrayottar kalateel vangmayeen lekhan : Visheshta Yashvant Rao Chouhan yanchya sandarbhat.* Shivaji U, Kolhapur. Dr. S.G. Yadav.

2. Chougule, Bhavyakumar Rama. *Critical study of Marathi Jain story literature based on the puran.* Shivaji U, Kolhapur. Dr. R.T. Akkole.

3. Dagaonkar, Kalpana S. *Shri V.P. Kake yanchya sahityacha chikitsak abhyas.* Devi Ahilya, Indore. Dr. Anil Gajbhiye.

4. Pasarkar, Sheshnarayan Deoappa. *Manmath Shivling Yanchya Paramrahsya ya granthacha sarvageen chikitsak abhyas.* Shivaji U, Kolhapur. Dr. Nirmal Kumar Phadkule.

Geography

1. Awate, Sakharam Janardhan. *Agro-based industries in Bhima Basin : A spatial analysis.* Shivaji U, Kolhapur. Dr. M.G. Bhasin.

2. Gholap, Tukaram Namdeo. *Distribution of livestocks and fodder supply in Maharashtra.* Shivaji U, Kolhapur. Dr. K.S. More.

3. Kumbhar, Chandrakant Rajaram. *Socio-economic impact of Warnangar Industrial Complex on the hinterland: A geographical analysis.* Shivaji U, Kolhapur. Dr. R.N. Hardikar.

4. Shinde, Kiran Ankush. *Social area analysis of Ratnagiri District: A geographical study.* Shivaji U, Kolhapur. Dr. S.D. Shinde.

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1. Abhay Kumar. *A critical study of the socio-economic life under the Chandella's as depicted in inscriptions, coins and art pieces in Jejakabhukti.* HS Gour, Sagar. Dr. R.N. Aggarwal.

2. Butoulia, Damyanti. *Bundelkhand ke Rajput shaskon ke prajay ke karan, 1000 isvi se 1300 isvi tak.* HS Gour, Sagar. Prof. B.N. Sharma.

3. Limaye, Nanda Ramchandra. *Evolution and growth of culture in ancient Maharashtra.* Shivaji U, Kolhapur. Dr. B.R. Kamble.

4. Pachouri, Shyam Manohar. *Chandel Naresh Yang aur unka yug.* HS Gour, Sagar. Prof. B.N. Sharma.

5. Paliwal, Virender Kumar. *Madhya Pradesh ka rajnitik itihas: Prarambh se lekar classical yug ke ant tak*. HS Gour, Sagar. Dr. R.N. Aggarwal.

6. Pandey, Shri Kant. *Prachin Bharat mein Samrajyik Rajvanshon ke antrajateeya sambandhon ka adhyayan: Maurya kal se satveen shatabdi ke ant tak*. HS Gour, Sagar. Dr. Sudhakar Pandey.

7. Pradnyawant, Gautam. *Dr. Ambedkar as Parliamentarian : A historical study*. Shivaji U, Kolhapur. Dr. V.S. Kadam.

8. Sharma, Rajesh Kumar. *Bharatiya rashtriya andolan aur Makhanlal Chaturvedi : Antakriya ka adhyayan*. HS Gour, Sagar. Dr. G.S. Tripathi.

9. Sreedharan Nair, V. *The plantation industry in the Travancore high ranges upto* 1947: *A historical analysis*. U Ker, Trivandrum. Dr. N. Rajendran.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Psychology

1. Agnihotri, A.N. *Crime and neuroticism*. Kanpur U.

2. Amar Kumar. *Adolescents perception of maternal role and its relationship with anxiety and some personality variables*. Kanpur U.

3. Gupta, Parvati. *Motivational pattern and self-image as related to prolonged deprivation*. Kanpur U.

4. Josan, Balbir Chand. *Socio-psychological differentials of vocational maturity between rural and urban high school students*. Pb U, Chandigarh.

5. Kapoor, Renu. *Task complexity reinforcement and personality variables as determinants of discrimination learning in nursery school children*. Kanpur U.

6. Misra, Jagdish Prasad. *A study of hostility, ego-strength and thinking disturbances in paranoid schizophrenic and unspecified chronic schizophrenic patients*. Kanpur U.

7. Quazi, Afifa Sultana. *A Study of some factors in adjustment patterns of adolescent boys and girls in Bangladesh*. MSU, Baroda.

8. Saxena, Varija. *Some personality characteristics of cancer and cardiovascular patients*. Kanpur U.

9. Sharma, J.N. *Adolescents interests as determined by personality factors, anxiety and sex*. Agra U.

10. Shrivastava, Mahesh Prasad. *A study of cognitive, style and selfconcept in socially disadvantaged children*. HS Gour, Sagar.

11. Singh, S.D. *Need patterns, achievement and adjustment of mentally superior children*. Agra U.

12. Singh, Shail Kumari. *Social conformity : An investigation into some personality correlates; need achievement, need affiliation, dominance extraversion, neuroticism, anxiety*. Agra U.

13. Tayal, O.P. *Visual perceptual scheme through mathematical models. D. Litt*. Kanpur U.

Sociology

1. Agnihotri, U.S. *The study of factional leadership in the rural social organisation : A comparative study of three villages in community development block, Kalyanpur District, Kanpur*. Kanpur U.

2. Chauhan, S.S. *Alienation in industrial context*. Kum U, Nainital.

3. Gahlaut, Usha. *Suicide in an industrial town: A sociological study of the factors contributing to attempted and successful suicides*. Kanpur U.

4. Gautam, B.D.S. *The study of correctional social organisation in the crime prevention at Kanpur,* U.P. *with special reference to probation and parole*. Kanpur U.

5. Gupta, Swarup Chand. *Socio-cultural factors affecting child health*. Pb U, Chandigarh.

6. Makhija, Gyan Devi. *Causes and consequences of divorce in Hindu community with reference to Kanpur District*. Kanpur U.

7. Patil, Ashok D. *Madhya Pradesh ke poorv Nimadh Jile kee Korku janjati ka samajik parivartanon ke pariprekshya mein ek samaj shastriya adhyayan*. Devi Ahilya, Indore.

8. Sharma, Diwakar. *Ek sanskritik punaparivartan ke abhiyan ka samajshastriya adhyayan*. HS Gour, Sagar.

9. Sharma, Satish Kumar. *The role of Arya Samaj movement in the uplift of untouchables in the Panjab*. Pb U, Chandigarh.

Political Science

1. Chaturvedi, Madhukar Shyam. *The constitutional dimensions of the office of the President of India : A critical and comparative study*.

2. Gupta, Madhu. *Impact of the concept of welfare state on Police administration in U.P.* Agra U.

3. Gupta, S.C. *India's foreign policy during the Prime Ministership of Lal Bahadur Shastri*. Kanpur U.

4. Mishra, Dhira. *The political role of women in the Ramcharit Manas*. Mag U, Bodh Gaya.

5. Mistry, S.P. *The role and impact of women leaderships on social political and administrative affairs of M.I.,* 1965 *to present day*. Bhopal U.

6. Shah, K.G. *Bharatiya samvidhan ke antragat swatantrata ke maulik adhikar ka alochnatmak adhyayan*. Bhopal U.

7. Sheojee Prasad. *The training system for the officers of the Indian Police Service*. Mag U, Bodh Gaya.

Economics

1. Barlingay, Manojna S. *Yugoslav economic development under self management socialism: A historical survey*. U Poona.

2. Bhoj. B.S. *Kumaun mandal ke parvateeya anchal mein sansthagat vitt kee sthiti evam sambhavnayen*. Kum U, Nainital.

3. Chacko, K.S. *A study of size location and linkage effects of small scale industries units located in industrial estate of M.P.* Bhopal U.

4. Dhariwal, Mohinder Singh. *Economics of public health: Measurement of the effectiveness of health expenditure on the productivity of labour*. GNDU, Amritsar.

5. Guha, Sisir. *Role of railways unions and their impact on administrative decision making process with special reference to North East Frontier Railway*. NBU, Rajarammohunpur.

6. Mehrotra, H.M. *The role of deficit financing in the developing economy of India*. Kanpur U.

7. Mehta, Brijkishor. *Chattisgarh ke vishesh sandarbh mein manviya sansadhan evam arthik vikas*. RSU, Raipur.

8. Mod, M.K. *Madhya Pradesh mein shahri dugdh poorti adhyayan: Bhopal sambhag ke vishesh sandarbh mein*. Bhopal U.

9. Naik, Tukaram G. *Economic development and changing agricultural production pattern with special reference to Satara, Sangli and Kolhapur Districts, SSK Region, from* 1950-51 *to* 1976-77. U Poona.

10. Ojha, Vishwambhar Nath. *Economics of production, marketing and processing of paddy in District Banda, Bundelkhand Region, U.P.* CSAT, Kanpur.

11. Pradhan, Gopinath. *Structure and working of industrial estates in Orissa.* Sambalpur U.

12. Ram Kunwar. *Study of savings and investment in agriculture.* Kanpur U.

13. Sharma, B.P. *Role of farm financing institutions in the development of agriculture in District Etawah.* Kanpur U.

14. Sharma, R.B.L. *Swantrata prapti ke pashchat Uttar Pradesh mein sangthit udyogon mein samajik suraksha ka adhyayan.* Agra U.

15. Shiv Saran Lal. *Bharat mein charam udyog: Uttar Pradesh ke pariprekshya mein.* Kanpur U.

16. Singh, Chandra Pal. *Role of farm financing institutions in augmenting production, productivity, income and employment in farming in District Basti.* CSAT, Kanpur.

17. Singh, J.N. *Uttar Pradesh kee krishi arthavyavastha mein Rae-Bareilly Janpad ke lift sinchai pariyojanaon ke yogdan ka mulyankan.* Kanpur U.

18. Singh, K.B. *Agricultural and economic development in Bihar with reference to food grains.* Mag U, Bodh Gaya.

19. Singh, Tilak Raj. *An enquiry into farm structure resource use and productivity on farms in District Meerut, U.P.* Kanpur U.

20. Tewari, Ram Gopal. *A Survey of industrial potential of District Sitapur in U.P.* Kanpur U.

21. Tripathi, Shiv Kishore. *Inflation and economic development in India during the first two decades of the plan period.* Avadh U.

Law

1. Sadasivan Nair, G. *Mental abnormality and criminal responsibility.* U Cochin.

Military Science

1. Gupta, Rajan Kant. *Military traints of Tatya Tope.* Kanpur U.

Education

1. Bajadir, S.K. *A comparative study of values, attitudes and conformity behaviour of adolescents in Kanpur.* Kanpur U.

2. Daulat Ram. *Organisational climate and innovativeness of school in relation to teaching effectiveness.* U Jammu.

3. Dinesh Chandra. *The implementation of the Directive in Article 45 of Constitution in U.P. and its problems.* Kanpur U.

4. Jaleel, P.M. *Education and economic growth in Malappuram.* Calicut U.

5. Kamlesh. *Anusuchit Janjati evam anusuchit jati ke chhatron ke atmabodh, samayojan, ruchi tatha abhiprerna paddhati ka tulnatmak adhyayan.* Kanpur U.

6. Manvikar, Sharada. *A critical study of the relationship between the expenditure pattern and efficiency levels of the secondary schools of Bangalore District.* U Mysore.

7. Misra, T.P. *Financing of higher education in Uttar Pradesh after independence.* Kanpur U.

8. Pande, Premlal. *An analytical study and development of the secondary school curriculum in Maharashtra.* Nagpur U.

9. Pandey, Prakash Narain. *The curriculum and methods of teaching in ancient India and their relevance to modern times.* Kanpur U.

10. Pandey, Pratibha. *Personality profiles of student teachers.* HS Gour, Sagar.

11. Rastogi, R.P. *School climate psychological health and classroom functioning of students in relation to their satisfaction-dissatisfaction with school.* Kanpur U.

12. Shaikh, Razia Azim. *A study of life style of slum dwellers and its relation with education.* MSU, Baroda.

13. Sharma, Rakesh. *Student morale as a correlate of educational environment in the school.* Pb U, Chandigarh.

14. Shukla, Shradha. *The effect of anxiety socio-economic status and personality on the proficiency of the secondary school teachers.* Kanpur U.

15. Upadhyay, G.C. *A study of the effect of education upon socio-psychological pattern on rural life of Kumaun Region.* Kum U, Nainital.

16. Vardhini, V.P. *Development of a multimedia instructional strategy for teaching science (Physics and Chemistry) at secondary level.* MSU, Baroda.

17. Verma, R.S. *A study of socio-psychological make up of adolescents belonging to Scheduled Tribes Tharn and Boksa in Nainital District.* Kum U, Nainital.

Commerce

1. Agarwal, V.K. *Marketing of dairy products in Western U.P.* Agra U.

2. Awasthi, J.P. *Problems of rural finance in Uttar Pradesh with special reference to the Eastern Districts.* Kanpur U.

3. Bajpai, N.K. *Working of Life Insurance Corporation of India.* Kanpur U.

4. Daud, S. *A study of size and structure of cotton textile industry in M.P.* Bhopal U.

5. Dixit, V.B. *A study of Employees State Insurance Scheme with special reference to U.P.* Kanpur U.

6. Gupta, Baij Nath. *Uttar Pradesh mein swatantrata prapti ke paschat sahkari krishi vipnan ka itihas.* Kanpur U.

7. Joshi, K.C. *Vanijaya, udyog evam krishi ke vitt prabandhon mein vyaparik bankon evam deshi bankers kee bhoomika* Kum U, Nainital.

8. Katiyar, R.C. *Accounting for price level changes.* Kanpur U.

9. Mukherjee, Deepankar. *India's trade with socialist countries since 1961 with special reference to East European countries.* Kanpur U.

10. Ravindra Kumar. *A study of finances and working of Uttar Pradesh State Road Transport Corporation.* Kanpur U.

11. Satish Chander. *Cost management and control in tractor industry of India.* U Delhi.

Home Science

1. Puar, Mrunalinidevi Anandrao. *Essential trace element profile and zinc availability in Indian foods and diets.* MSU, Baroda.

Management

1. Chandrasekharan Pillai, N. *Recruitment and training of managers in the public sector concerns in Kerala.* U Cochin.

2. Karunes, Sabita. *Factors related to professional productivity: A study of scientists and engineers in Indian Institutes of Technology.* IIT, Delhi.

3. Mishra, Dinesh. *Financial planning and control in major state enterprises of Bihar with special reference to Bihar State Road Transport Corporation and Bihar State Electricity Board.* Bihar U, Muzaffarpur.

4. Suresh, K.A. *The economics of cardamom plantation in Kerala.* U Cochin.

CLASSIFIED ADVERTISEMENTS

NORTH-EASTERN HILL UNIVERSITY
SHILLONG

Advertisement

Applications are invited for the following posts to work under a research project entitled "Regulation of glutamine metabolism in controlling ammonia toxicity in air-breathing fishes" sanctioned by the U.G.C. for 3 (three) years to Dr. B.K. Ratha, Reader, Zoology Department, NEHU, Mayurbhanj Complex, Shillong-793014 as the **Principal Investigator.**

1. Junior Research Fellows : Two posts.

Consolidated Monthly Salary : Rs. 600/- P.M. for the first two years and after assessment Rs. 700/- P.M. for 3rd year.

2. Field Assistant : One post. Rs. 400/- P.M. (Consolidated)

Qualifications : Candidates for JRF should have a first or high second class (at least with 55% marks) M.Sc. in Zoology/Life Sciences with specialisation in Physiology & Bio-Chemistry or M.Sc. in Bio-Chemistry. Research experience in Animal Physiology and Bio-Chemistry will be additional qualification.

Candidates for Field Asstt. should have passed H.S.L.C. or equivalent Examination. Qualifications could be relaxed in cases of candidates having good experience in field or laboratory work related to the project.

The applications in plain paper stating name, address for correspondence, date of birth and qualifications (supported by evidences), and at least one testimonial about the academic competence of the JRF candidates only should reach the Principal Investigator by name on or before **15th March, 1984.** The selected candidates should be prepared to join immediately.

Mrs. M.R. Mawlong
REGISTRAR

PANJAB UNIVERSITY
CHANDIGARH

Corrigendum

In the Advertisement No. 2/84, the post of Reader in Sociology may be read as Reader in Urdu.

INDIAN INSTITUTE OF TECHNOLOGY, DELHI
HAUZ KHAS : NEW DELHI-16

Advertisement No. 4/84

Announcement for Faculty Positions

A. **Post**	**Professor**
B. **Pay Scale**	Rs. 1500-60-1800-100-2000-125/2-2500. (plus allowances as applicable in Government of India). Emoluments : Minimum Rs. 2575/-. Maximum Rs. 4200/-.

C. **Departments and Specialisations for which Positions will be Filled**

Department	**Specialisations**
1. Department of Applied Mechanics	Solid Mechanics, Design Methodology and Optimization, Stress analysis. Fluid Mechanics, Solid Transportation through Pipes. Physical Metallurgy and fracture of Steels.
2. Department of Chemical Engineering	Process Dynamics & Control. Chemical Reaction Engineering. Transfer Process. Process Design. Simulation & Modelling. Chemical Engineering, Thermo Dynamics.
3. Department of Civil Engineering	Soil and Rock Mechanics, Structural Engineering, Water Resources Engineering, Transportation Engineering, Offshore Structures, and Curriculum Development in Civil Engineering.
4. Department of Mechanical Engineering	Design, Thermal Production and Industrial Engineering.
5. Department of Electrical Engineering	All areas of Electrical, Electronics Engineering including digital electronics, microprocessor, computer applications and opto-electronics & Optical Communication.
6. Department of Textile Technology	Textile Engineering and Mechanical Processing.
7. Department of Humanities & Social Sciences	Sociology, Economics—Mathematical/Industrial, English language.
8. Department of Chemistry	Bio-chemistry.

D. **Minimum Qualifications/Experience Prescribed for Recruitment**

(a) **For Departments mentioned at Sl. No. 1 to 6 of Column "C" above.**

An eminent scholar with published work of high quality actively engaged in research. Ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding Engineer/Technologist with established reputation who has made significant contribution to knowledge.

(b) **For Department mentioned at Sl. No. 7 & 8 of Column "C" above.**

Good Master's Degree/Doctorate degree in appropriate field with minimum 7-10 years' distinguished experience in Institution of University standard at post-graduate level, specialised knowledge in one or more specialised fields with experience in guiding research. Professional/Scientific work of outstanding merit and Doctorate degree would be preferred.

Prescribed application forms with detailed particulars may be obtained from the Deputy Registrar (E-I), Indian Institute of Technology, Delhi, New Delhi-16 either in person or sending by post, a self-addressed stamped envelope (size 10 x 23 cms) bearing postage stamps of 95 paise. Last date for submission of Application Forms alongwith Indian Postal Orders in favour of Registrar, I.I.T. Delhi worth Rs. 7.50 (Rs. 1.87 for SC/ST candidates), is **10-3-1984** for candidates in India and **20-3-1984** for candidates abroad.

SRI SATHYA SAI INSTITUTE OF HIGHER LEARNING

(DEEMED UNIVERSITY)

PRASANTHINILAYAM-515134 (A.P.)

Applications for the following posts in the departments noted are invited. Posts will carry U.G.C. Scale of Pay.

Minimum Qualification

For Professor : Ph.D. with 10 years teaching experience.

For Reader : Ph.D. with 5 years teaching experience.

For Lecturers : Ph.D. with 2 years teaching experience. Condition regarding minimum experience in this category is relaxable.

Prasanthinilayam Campus : (For men).

(1) Department of Mathematics

Professor—1.
Reader—1

Areas of specialisation

Professor : Functional Analysis/Operation Research with background of Numerical Analysis/Fluid dynamics with Mechanics and Differential Equations background/Topology/Modern Algebra and Statistics.

Reader: Statistics and Operation Research.

(2) Department of Physics

Professor—1.
Lecturer—1.

Areas of specialisation

Professor : Theoretical Physics, Molecular Physics/Modern Optics and Lasers.

Lecturers: Theoretical Physics (with emphasis on Mathematical methods/Optics and Spectroscopy/Material Science.

(3) Department of Chemistry :

Readers—2.
Lecturers—2.

Areas of specialisation : Inorganic/Analytical/Physical/Theoretical/Bio-chemistry.

(4) Department of Bio-Sciences

Readers—2.

Areas of specialisation : Environmental Biology/Histophysiology and Histopathology.

(5) Department of History & Indian Culture

Professor—1.
Reader—1.
Lecturers—2.

Areas of Specialisation : Indian philosophy with Sanskrit Literature/Theory of Yoga, with basic degree in Psychology or Philosophy/Modern History.

(6) Department of Commerce

Professor—1.
Readers—2
Lecturers—2.

Areas of specialisation : Management Accounting/Accounts and Finance/Statistics and Quantitative Analysis/Bank Management.

(7) Department of English

Reader—1.

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Areas of specialisation : English Literature/American Literature/Commonwealth and Indian English Literature. General Linguistics with reference to English /phonetics of English/ Grammar and usage of English/principles of teaching English as second Language.

Anantapur Campus : (For Women).

(1) **Department of English Language and Literature :**

Professor—1.

Reader—1.

Lecturer—1.

Areas of specialisation: Same as above

(2) **Department of Commerce :**

Lecturer—1.

Areas of specialisation : Any field in Commerce.

(3) **Department of Mathematics :**

Lecturer—1.

Areas of specialisation : Any field in Mathematics.

The Institute is committed to carrying out R & D work adopting Interdisciplinary and Cross-disciplinary approach. Hence the candidates applying for the various positions must have the aptitude to work in a team of inter-disciplinary nature.

Apply to the Registrar giving full bio-data, subjects studied, class obtained, certified copies of Degrees including Doctorate degree, list of publications with reprints and accompanied by crossed Demand Draft for Rs. 10/- drawn in favour of Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam.

Last date for receipts of applications is **31st March, 1984.**

REGISTRAR

UNIVERSITY OF JAMMU

Situation Vacant

Applications on the prescribed form are invited for the following posts so as to reach the undersigned on or before **31 March, 1984** :—

1. Professors (Rs. 1500-2500), Chemistry (two posts; one each in Organic and Inorganic), Urdu (One post) and one post each in Political Science and Economics (Lien Vacancies).
2. Readers (Rs. 1200-1900), Chemistry (two posts; one each in Physical and Organic Chemistry of Plant Products), one post each in English, Mathematics (Modern Algebra), Library Science and Computer Science.
3. Lecturers (Rs. 700-1600), one post each in English (Language Oriented Course and for Literature), Education, Computer Science and Mathematics (Geometry; Differential/Riemannian).

Prescribed application forms and other details can be had from Shri Vachaspati Sharma, Assistant Registrar (Forms & Stationery) by sending a self-addressed envelope (25 cms x 10 cms) bearing postage stamps worth Rs. 4/- alongwith crossed postal order worth Rs. 20/-, drawn in favour of the Registrar, University of Jammu, Canal Road, Jammu (Tawi)-180001, encashable at Jammu Post Office.

J.R. Rathore
REGISTRAR

UNIVERSITY NEWS

A Weekly Journal of Higher Education & Research
(Published on : 1, 8, 16 & 23 of every month)

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University

News

INDIAN INSTITUTE OF TECHNOLOGY

KHARAGPUR

Advertisement No. R/1/84

Applications are invited for the undermentioned posts at the Indian Institute of Technology, Kharagpur, West Bengal.

Posts

I. Professors

Scale of Pay : Rs. 1500-60-1800-100-2000-125/2-2500/- plus D.A. as admissible.

Age : Preferably below 50 years.

Qualifications & Experience

Essential

An eminent scholar with published work of high quality actively engaged in research. Ten years' experience of teaching and/or Research. Experience of guiding research at Doctoral level.

OR

An outstanding Engineer/Technologist with established reputation who has made significant contribution to knowledge.

N.B.: If a person is not found suitable for the post of Professor, he may be offered the post of Associate Professor in the scale of Rs. 1500-60-1800-100-2000/-.

Fields of Specialisations

A. **Aquacultural Engineering Section under Agricultural Engineering Department** : One post.

Degree in Aquacultural Engineering/Agricultural Engineering/Civil Engineering.

Desirable

Experience in Coastal Hydraulic model studies/water management for aquacultural farms.

B. **Curriculum Development Cell under the Quality Improvement Programme, Govt. of India :** One post. (Temporary)

Electrical Engineering/Electronics & Electrical Communication Engineering/Computer Science and Engineering.

Desirable : Previous experience in Curriculum Development.

II. Assistant Professors

Scale of Pay : Rs. 1200-50-1300-60-1900/- plus D.A. as admissible.

Age : Preferably between 30 and 45 years.

Qualifications & Experience

Essential

Good academic record with a Doctor's degree in a relevant field About 5 years' experience of teaching and/or research and development.

Candidates not possessing Ph.D. may be considered if they have to their credit equivalent research published work of design/development work of a high order either in the institution or in an industry.

OR

In the case of persons to be recruited from industry or professional fields, candidates should possess good academic record with recognised professional work of about 7 years which should include innovation and/or research and development.

Fields of specialisations

A. **Physics & Meteorology Department** : One post.

(Specialization in one of the following is required).

1. Nuclear Physics (Theoretical/Experimental).
2. Elementary Particle Physics (Theoretical).
3. X-Rays and Structure of Matter (Experimental).
4. Solid State Physics (Theoretical/Experimental).
5. Theoretical Physics (Quantum Mechanics/Statistical Physics).

B. **Rubber Technology Centre :** One post. Candidate with degree in Physics/Chemistry/Chemical Engineering, Mechanical Engineering/Equivalent degree with experience of having worked in the field of Rubber Technology is required.

C. **Curriculum Development Cell under the Quality Improvement Programme, Govt. of India :** Two posts. (Temporary).

Electrical Engineering/Electronics & Electrical Communication Engineering/Computer Science and Engineering.

Desirable : Previous experience in Curriculum Development.

III. Lecturers

Scale of Pay : Rs. 700-40-1100-50-1600/- plus D.A. as admissible.

Age : Preferably between 28 and 38 years.

Qualifications & Experience

Essential

(i) Master's degree in appropriate field in Engineering/Technology.

(ii) Consistently good academic record with a Bachelor's degree in Engineering/Technology. First Class at Bachelor's degree and/or Master's degree level.

(iii) One year's relevant professional experience outside academic/research institutions.

Having regard to the requirements of emerging fields of Engineering and of developing interdisciplinary programmes, the requirements of Engineering/Technology degrees may be waived in the cases of otherwise well qualified candidates.

If a candidate does not possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of five years of his appointment failing which he will not be able to earn future increments, until he fulfils this requirement.

Fields of Specialisations

A. **Civil Engineering Department:** One post.

Environmental Engineering and Sanitation/Public Health Engineering.

B. **Naval Architecture Department:** Two posts.

Ship Design, Ship Hydromechanics. Ship Motions, Ship Production, Ship Structures, Ocean Engineering Structures and Vehicles.

IV. **Homoeopath Medical Officer (B.C. Roy Technology Hospital) :** One post.

Scale of Pay : Rs. 700-40-900-EB-40-1100-50-1300/- plus D.A. and Non-practising allowance as per rules.

Age : Not exceeding 35 years (Not exceeding 40 years for Scheduled Caste and Scheduled Tribe candidates). Relaxable for Government Servants.

Qualifications

Essential

(i) B.M.S. (Homoeopathy), D.H.M., D.M.S. (Hons), B.M.B.S. or M.H.M.S., D.H.S. or equivalent Diploma (4 years' course) or G.H.M.S. degree (Agra) or equivalent.

(ii) At least five years of Homoeopathic practice in a recognised Hospital or Dispensary.

Note: The period of service rendered by the Doctors who were drafted to serve the Defence Forces under compulsory Liability Scheme is counted in reckoning experience.

Desirable

(i) B.Sc. or equivalent degree in Science from a recognised University.

(ii) Post-graduate Diploma/Degree in Homoeopathy.

Duties

(i) Medical attendance & treatment of Institute employees, members of their families and other beneficiaries covered under the Institute Medical Rules.

(ii) To pay domiciliary visits at the residences of beneficiaries in case of emergency or whenever considered essential.

(iii) Any other duty that may be assigned to him from time to time.

V. **Assistant Registrar :** One post (Reserved for Scheduled Caste/Scheduled Tribe candidates).

Scale of Pay : Rs. 700-40-900-EB-40-1100-50-1300/- plus D.A. as admissible.

Qualifications
Essential

(i) A good degree in Arts, Science, Commerce or Business Management.

(ii) Must have good knowledge of procedure of general administration or accounting of each and other transaction, preferably both, and be able to draft reports and minutes of conferences.

(iii) At least 10 years' experience in a responsible position under Govt. or in a large educational institution or business organisation of repute.

Desirable

(i) Experience of supervision of Establishment work, meeting and conference work.

(ii) Experience in O.M. Unit work.

(iii) Capacity to develop corporate life within the educational institute.

VI. Assistant Engineer (Civil) : Maintenance Unit : One post (Temporary).

Scale of Pay: Rs. 650-30-740-35-810-EB-35-880-40-1000-EB-40-1200/- plus D.A. as admissible.

Qualifications & Experience

Essential

Graduate in Civil Engineering with a minimum experience of 3 years or Diploma holder in Civil Engineering with a minimum experience of 8 years of which at least 5 years experience in Construction, Maintenance and Civil Works of Public Health Engineering.

The qualifications regarding experience is relaxable at the discretion of the competent authority in the case of candidates belonging to the Scheduled Castes or Scheduled Tribes, if at any stage of selection, the competent authority is of the opinion that sufficient number of candidates from these communities possessing the requisite experience is not likely to be available to fill up the vacancies reserved for them.

Application forms may be had from the Registrar on request along with an unstamped self-addressed envelope of size 23 cm × 10 cm. Applications accompanied with an application fee (non-refundable) of Rs. 7.50 (Rs. 1.87 for SC/ST candidates) payable by means of crossed Indian Postal Order to the Indian Institute of Technology, Kharagpur at Kharagpur—721 302 Post Office should reach the Registrar, Indian Institute of Technology, Kharagpur by the **30th March, 1984.**

Applicants who are in the Employment of Government/Semi-Government Organisation or of any Government undertaking must send their applications through proper channel.

A.K. Sur
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY

P.O. IIT, POWAI, BOMBAY-400 076

Advertisement No. A-183/84

Faculty Positions in Industrial Management & Earth Sciences

Applications are invited for the following permanent posts at this Institute, in the prescribed form obtainable free of charge from the Registrar, Indian Institute of Technology, P.O. IIT, Powai, Bombay-400 076, on request accompanied by a self-addressed envelope (25 cm x 10 cm.) Persons employed in Government/Semi-Government Organisations or Educational Institutions should apply through proper channel.

All applicants should supply a detailed account of their academic and professional record including a list of publications, names and addresses of three professional references and copies of selected publications.

Indian candidates abroad may apply on plain paper enclosing two copies of their bio-data.

The posts carry allowances such as D.A., C.C.A., H.R.A. as per rules of the Institute which at present correspond to those admissible to the Central Government employees stationed at Bombay. Depending on qualifications and experience, higher salary may be offered. A candidate may be considered for a lower position of a Lecturer if not recommended for the post of Assistant Professor. Completed applications should reach the Registrar, IIT, P.O. IIT, Powai, Bombay-400 076 **on or before 16th April, 1984.**

Some posts of Lecturers are reserved for the candidates belonging to SC/ST community.

Assistant Professor : Scale of Pay : Rs. 1200-50-1300-60-1900.

Lecturer : Scale of Pay: Rs. 700-40-1100-50-1600.

Total emoluments on the minimum of the scale excluding H.R.A.

On basic pay of Rs. 1200/- : Total emoluments Rs. 2345/-.

On basic pay of Rs. 700/- : Total emoluments Rs. 1589.35

1. Interdisciplinary Programme in Industrial Management

The Management Programme at the Indian Institute of Technology is committed to excellence in the education, research and practice of industrial management. The educational programme leading to Master's and Doctoral degrees, follows three distinguishable and related lines, viz. theoretical studies, applied studies and practical exposure and is designed to develop basic skills, strengthen functional skills and deepen understanding of the environment in which organisations operate.

The Institute encourages the participations by the faculty in sponsored projects and consultancy assignments. Bombay and the Western Region offers excellent scope for close interactions with the Industry.

Qualifications & Experience
Assistant Professor

Applicant should have consistently good academic record with Bachelor's degree in Engineering ; M.B.A. or equivalent or M. Tech. in a closely related field and preferably Ph.D. in Management, from well-recognised institutions in India or abroad. About 5 years' experience in industry, research and/or teaching.

Lecturer

Applicant should have consistently good academic record with Bachelor's degree in engineering ; M.B.A. or equivalent or M. Tech. in a closely related field and preferably Ph.D., in Management from well-recognised institutions in India or abroad. About one year's experience in teaching, industry or research desirable.

Field of Specialisations : (in one or more of the following).

Marketing Management; Accounting, Business Economics and Finance; Computers and Systems Analysis; Production Management; General Management.

2. Department of Earth Sciences

Lecturer in Geology

Applicant should have an excellent academic record with Doctorate Degree in Geology/Geophysics/Geochemistry from a recognized university or institute, with specialisation in one or more of the following fields and with a minimum of one year of teaching/industry/research experience after obtaining Ph.D. Degree.

Field of Specialisations

Geophysics with experience in prospecting; structural geology and mining geology; marine geology; hydrogeology and environmental geology.

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AIU House, 16 Kotla Road, New Delhi 110002. Grams : UNIBOARD. Phones : 276504 & 273037.
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University News

ARCH 8, 1984

Re. 1.00

Air Chief Marshal I. H. Latif (Retd.), Governor of Maharashtra, delivering his address at the convocation of the SNDT Women's University. On his left is Dr. (Mrs.) Madhuri R. Shah, Chairperson, University Grants Commission who delivered the convocation address.

GUJARAT VIDYAPITH

AHIMSA, THE ATTRIBUTE OF SOUL

"We have to make truth and non-violence, not matters for mere individual practice, but for practice by groups and communities and nations. That at any rate is my dream. I shall live and die in trying to realize it. My faith helps me to discover new truths every day. **Ahimsa is the attribute of the Soul, and therefore to be practised by everybody in all affairs of life."**

—M. K. GANDHI

THE ENCYCLOPEDIA OF AHIMSA (NON-VIOLENCE)

Co-ordinator : Prof. RAMLAL PARIKH
Vice-Chancellor

Shri Jamanalal Bajaj Institute of Studies in Non-Violence, a multi-disciplinary research institute of the Gujarat Vidyapith have undertaken to prepare—a first of its kind, "ENCYCLOPEDIA OF AHIMSA (Non-Violence)', giving a comprehensive documentation of the evolution of Non-Violence from the earliest times to the contemporary age. It is scheduled **to be published on 18th October, 1985** in commemoration of the 65th annivarsary of the founding of the Gujarat Vidyapith, by Mahatma Gandhi.

The encyclopedia will be published in three volumes, each of about 500 pages of Royal Octavo size. The first volume will feature the views of world renowned scholars on the Philosophical foundations of Non-violence along with abstracts of researches in this field. Articles of outstanding authors on various aspects of Non-violence in its relation to Science, Technology, Ethics, Social Sciences, Society etc. will be included.

The Second volume will contain an annotated glossary of all words and names related to studies in Non-violence with authentic account of programmes and movements of all types of application & practice of Non-violence in individual and social life.

The final volume will contain a chronology of the evolution of Non-violence along with a comprehensive bibliography of books and journals.

This publication will fulfil a long-felt need for the access of all information & understanding on Non-violence, to facilitate studies in Non-violence in global perspectives and help disseminate ideals and programmes of Non-violence throughout the world.

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* For comprehension of facts on practice of Non-violence—Societal as well as Individual.
* For Education of Non-violence to all.

This will be an indispensable reference work.

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It is imperative to practice Non-violence in social, economic, political and spiritual life to realise enduring peace.

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From War to peace
From Untruth to Truth
From Darkness to Light
From Death to Life

Non-violence is the only Continuum of Mankind.

Pre-publication Price

For established libraries & research organisations only, if money is remitted through Bank-draft payable to Gujarat Vidyapith on State Bank of India, Ashram Marg Branch, Mahatma Gandhi Campus, Ahmedabad-380014, INDIA.

Rs. 1500/- or US $ 150/- (For three Volumes)

Last date of receiving advance payment as Pre-publication price will be 31st December, 1984.

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Publication will be sent by surface mail to persons/institutions abroad. But extra US 10$ will have to be remitted if delivery is required by air-mail.

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UNIVERSITY NEWS

VOL. XXII No. 10
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Editor :

M.S. RAMAMURTHY

New Technologies in Higher Education

Higher education in India is at crossroads. Reforms and innovations are sweeping the educational sector all over the world. One of the forces influencing change in education is the emergence of newer and more advanced communication and computer technologies. A seminar on "New Technologies in Higher Education" was organised from 9 to 11 January, 1984 under the joint auspices of the UGC and AIU by the University of Poona at which the focus of the seminar was to discuss the role of these new educational technologies in the solutions to educational problems facing the universities in particular and the nation as a whole.

The seminar discussed the following topics: (a) The new educational technology; (b) New technologies and formal education; (c) New technologies and non-formal education; (d) Adoption and integration of new technologies in the present educational pattern; (e) New technologies and learning in future—some relevant issues for educators.

The seminar was attended by nearly 50 educationists, especially from the Western Region. Dr. Rais Ahmed, Vice-Chairman of the University Grants Commission attended the seminar and formally inaugurated it on 9th January 1984. Professor Jagdish Narain, Secretary, Association of Indian Universities (AIU) also attended the seminar. Dr. R.G. Takwale, Vice-Chancellor, Poona University attended the deliberations throughout the duration of the seminar.

After discussing the various issues, the seminar in its last session unanimously made the following observations and recommendations:

(1) The seminar recognizes and supports the national objective and policy of harnessing modern technology for the purposes of coordinated national development.

(2) The seminar recognizes and appreciates the advances achieved in the area of educational technology and its significance in higher education with special reference to teaching, research and extension.

(3) The seminar recognizes the unlimited potential of new technologies in the dissemination and spread of quality education to a large number of learners in rural and remote areas who are deprived of adequate facilities of higher education. The Electronics revolution has made it possible to bring education at a reduced cost to a large population which is not able to participate in the formal system of education. The seminar further recommends that the Planning Commission and other national agencies should recognize this potential of new technologies while making allocations for the VII Plan.

(4) The seminar supports all efforts at the national, regional and institutional levels for the creation and strengthening of facilities in the field of new technologies.

(5) The seminar welcomes the establishment of the six Audio-Visual Resource Centres (AVRC's) and Educational Media Research Centres (EMRC's) in different universities by the University Grants Commission.

(6) The seminar calls upon the UGC to further support and strengthen these centres in order to develop them into viable nuclei of training, research and development, materials production and extension activities.

(7) The seminar urges the UGC to take up liaison with relevant national agencies as recommended by the Task Force appoint-

ed by the AIU in order to enable institutions of higher education to benefit from the various national facilities.

(8) The seminar recommends the starting of a *National Centre of Educational Media Research*, as suggested by the U.G.C. working group, for proper utilization of new technologies in higher education and for purposes of central coordination of all efforts in this direction.

(9) The seminar urges the newly created AVRC's and EMRC's start short term and long term training programmes as well as materials production for the area/State/Region concerned and to set up realistic research projects (both for the hardware and software) for utilization and upgradation of new technologies for higher education.

(10) The seminar urges the UGC to create AVRC's in all the universities and EMRC's at the regional and state levels.

(11) The seminar records its appreciation on the decision taken to equip the EMRC's and AVRC's with hardware and software resources to carry out efficiently the functions entrusted to them. At the same time the Seminar is anxious that in order that the implementation of new technologies becomes effective, in Higher Education Sector, every college must be provided with:

(a) a Micro-processor Computer with a CPU, floppy disk drive (1MB formated capacity), magnetic disk drive (10MB formated capacity) with a fast printer and dot matrix printer possibly with 3 terminals.

(b) a VCR with a Monitor (projection TV) capable of showing video programmes to students (single unit upto 1000 students, multiple units for increases student strengths).

A group of colleges may be provided with centralised facility for editing and preparing software materials.

(12) The seminar emphasizes the need for reserving a separate TV transmission channel exclusively for educational purposes.

(13) The seminar recommends that for the purposes of software and courseware production, multi-disciplinary teams of experts and specialists in education, language and media technology should be formed for re-orientation, training, and materials production.

(14) The seminar further recommends that these teams of specialists should plan and produce appropriate media packages for programmes at the local colleges, university level, and at the regional, state level and national level, both in regional languages and in English.

(15) The seminar recommends that adequate academic rewards must be provided to teachers participating in the programmes of educational technology at all the levels of teaching, research and extension.

(16) The seminar recommends the establishment of a communication research data-base and a communication network for extensive and efficient utilization of this data on a national basis by education, industry and government agencies. For this purpose select research projects at the local level be initiated to test the viability and usefulness of such networks.

(17) The seminar recommends that research in production of educational software should be given due recognition in the educational system. The institution of cash awards and certificates of Merit may be an additional incentive for teachers to increasingly undertake such activities.

(18) The seminar recommends to the U.G.C. as well as the State Government to make funds available under a separate head for educational technology in higher education. Efforts should also be made to generate resources from the industry and society at large.

(19) The seminar recommends that a journal devoted to New Technologies in Higher Education be supported and/or started by the U.G.C.

(20) The seminar is aware that the Indian manufacturers at present will not be in a position to meet the demands for all the hardware required for use in higher education. Further the hardware developed and produced in the country would have time gap of development of a few years which essentially delays the introduction and spread of new technologies in our country. In order to reduce this time gap at least in the human resource development, it is essential that import of such essential equipment by recognised educational institutions be facilitated during the VII Plan. At the same time more entrepreneurs should be encouraged to produce the equipment at competitive rates within the country. □

INSAT—1B and Higher Education

Text of the talk by Professor Rais Ahmed, Vice-Chairman, University Grants Commission broadcast over All India Radio in the Home Service under the Spotlight Programme.

There are many problems in higher education, some of which are related to availability of funds, economic development and employment, society's will to strike a proper balance between discipline and freedom in academic institutions and of course, the creation of flexible course structures, syllabii to take into account rapidly growing knowledge, and methods of teaching designed to involve students in thinking questioning reflecting and creating. A problem of great concern, however, is the seemingly divergent pulls of quality and quantity.

There has been a phenomenal expansion in higher education—such as perhaps has not taken place in any other country. The number of colleges and universities has grown, as the number of students has grown. The growth rate has been faster than that of our population. Yet we are way behind other countries in terms of the percentage of the age group 18 to 24 in the population which is enrolled in the colleges and universities. There are many areas where enrolment is far below the national average. There are sections of the population, for example, the poor, the tribals, and the scheduled castes, the rural people, the women who are behind others in higher education. The thirst for knowledge and the urge to make a living by means of higher levels of education has not abated and the tide cannot be turned merely by saying that no more colleges need be opened.

On the other hand the tide of numbers has impoverished the quality of education. Student-teacher ratios have suffered, the expenditure per student in real monetary terms has declined, average facilities in our colleges and universities are not the same as before. The interaction between students and teachers—in the form of tutorials or seminars, in laboratory and theoretical projects, in private discussions between teachers and the taught is not the same today as we had 25 or 30 years ago. No wonder the whole country is anxious about standards of education, about the declining role of the teacher in cultivating the many facets of a student's personality, his sense of values, his discrimination and judgement.

We are very fortunate indeed that the dilemma can be to a large extent resolved by modern technologies. Teachers can be assisted to teach better with the help of audio and visual aids, and lectures as well as seminar sessions can be audio or even video taped so that those who were unable to attend may also be benefitted. Self learning materials can be produced in large numbers—not only in print but also in other forms. They can be master minded by the best experts, and students in their turn can study them in libraries and reading rooms whenever it suits them best. Yes, this means additional expenditure but undeniably the enrichment of learning and access of more people to high quality education can be ensured—in a cost effective manner.

Again, fortunately, the country has gone "cosmic", we now have a satellite which can relay TV programmes, which can be viewed in all parts of the country, particularly with the help of low power local transmitters which are being installed in all towns—even towns with a population of 100 thousand. The considerable expenditure on the Satellite, which will be used for many other purposes, has been to a large extent justified because of what educational benefits we can reap with its help. In principle, every one desirous of receiving an educational programme can do so through community viewing. On this facility the whole country can be unified by some common educational thrusts and at the same time each region can be served according to its needs. There are exciting possibilities of class room situations, seminars or tutorial sessions to be beamed, vocational and technical courses requiring great deal of visuals to be conducted, and programmes for teachers' further education taken up without their having to leave their institutions. These programmes and facilities could form the core of a University of distance education which has been recommended to Government from various forums and which may now be soon started.

However at this stage we must be realistic—the ultimate will be achieved in the years to come—at the moment we should undertake that which is achievable.

The present position is that our college and university teachers who are to play a crucial role in producing suitable programmes have no acquaintance with the new TV or radio medium, and in the university system there are very limited facilities available for doing so. Therefore, a small but carefully planned, beginning has to be made, with provision for monitoring and evaluation so as to continuously expand and improve the programmes.

The University Grants Commission as an agency conerned with all universities and particularly responsible for maintenance of quality and standards has naturally taken the initiative. One hour has been assigned to higher education in the satellite programmes and the Commission has decided to set up training and production facilities with standard equipment in six institutions—some more may be added within the next year. A central programme committee has been set up to coordinate and channelize suitable material for daily telecast to doordarshan. It has been decided to make what are called enrichment programmes at the undergraduate level. Topics in different disciplines are being chosen so that the largest number of students and indeed any educated person may benefit. Some topics will relate to national development and national concerns such as agricultural or industrial visions, achievements, shortcomings, future perspectives—or national integration secularism and socialism which are a part of our constitution. These subjects will receive scholarly attention and will help to give breadth of knowledge and awareness to the viewers. There will be special programmes for teachers in higher education to enable them better to handle their class and examine work, to give them up-to-date knowledge and particularly to make them familiar with educational goals of their profession. Some selected world-class educational TV programmes will also be procured because of its excellence, and in many cases the thrill of learning which distinguished makers of those programmes can bring our student community.

The expectation is that these programmes will go on the air within a few weeks, for experimenting and adjusting the system. By the middle of the year regular programmes are likely to be telecast with colleges and universities provided part-assistance in setting up receiving centres. The entire programme will be watched and evaluated so as to improve it, and cast it in a higher mode during the Seventh Plan. We expect that the TV programmes will be supported by other learning material and that its impact will be felt throughout the country and in the performance of all students in their studies. This programme incidentally opens great vistas of new creative activity by teachers in colleges and universities. Those who have been constrained by chalk and talk can now learn to present their subjects with the new medium in a much broader frame to much larger audiences. □

Summer Institute on

'ALGORITHMIC ASPECTS AND APPLICATIONS OF MATHEMATICAL PROGRAMMING'

The Statistical Quality Control and Operations Research Division of the Indian Statistical Institute proposes to hold a Summer Institute on *'Algorithmic Aspects and Applications of Mathematical Programming'* at Indian Institute of Management Campus, Bangalore during 21st May to 9th June 1984.

Interested persons may apply to :

The Course Director
Summer Institute on Algorithmic Aspects and
Applications of Mathematical Programming
Indian Statistical Institute
143, Nungambakkam High Road
MADRAS-600034.

The deadline for applications is April 15, 1984. Each applicant is required to enclose his/her bio-data stating recent research interest and two letters of recommendation from the departmental heads or supervisors.

For the selected candidates round trip second class railway fare and free hostel accommodation will be provided by ISI.

Dr (Mrs) Madhuri Shah Addresses Convocation of SNDT Women's University

Excerpts from the Convocation Address delivered by Dr. (Mrs.) Madhuri R. Shah, Chairperson, University Grants Commission, at the SNDT Women's University, Bombay.

"....In 1916, when a university exclusively for women was established, not only was the idea considered utopian but innumerable difficulties arising out of conservatism and prejudice had to be overcome.

"Maharshi Karve, when he laid the foundation of this University called it "a leap in the dark". Today, standing on the threshold of the 67th year of its existence we can truthfully say that with the blessings of Karve, the visionary philosopher and Vithaldas Thackersey, the enlightened philanthropist and the devotion and zeal of those who believed in the ideals of these two great men, the emergence of this University has been "a leap from the dark unto the light".

"This transformation has been achieved through two distinct phases in the past. In the *first phase* was laid the foundation for creating a social awareness to the need for educating women and to enable the society to absorb a concept considered radical in those days, of women becoming socially and economically self-supportive through education. The *second phase* owes a great deal to the enlightened contribution and guidance of Dr. Premlilaben Thackersey who gave the University the nurture and strength to enter into new fields of endeavour. Tremendous increase in the facilities for education for women not only in the traditional field of literature and teacher training were introduced but also new vistas were opened by the introduction of professional and vocational courses through conducted colleges of Home Science, Nursing, Education and Library Science. The University soon became an instrument of social change and quietly but effectively contributed to national growth by providing courses of study and facilities for developing a wealth of talent which had for years remained untapped and dormant in the case of most women.

"The progress of the SNDT Women's University is a proof of woman's relentless determination to improve her condition. The University provided the drive and the leadership to get the standards of the task held high. "Life leaps like a geyser" wrote Alexis Carrel, provided you "drill through a rock of inertia." The University experiments to find the best, the easiest and quickest ways of getting things done by overcoming the rock of inertia. The progress may be slow but it is steady because the leadership in which the University developed the art of intensive concentration tried to simplify the complex tasks by undertaking one step at a time. If one wants to progress, one has to head the ancient Chinese wisdom: "A journey of a 1000 miles begins with a single step". The University has the distinction of not being a slave to a system, but making the system serve its objectives.

HOTWAVE
CHICAGO

Dr (Mrs) Madhuri R. Shah delivering the convocation address.

"The University has now entered into the third and present phase of its development. It is dedicated to the inculcation of value oriented education, balanced with scientific and technological knowledge to be achieved through a high standard of teaching. It recognises the present age which is said to be the age of science and technology. The forces generated by science and technology and democracy have been operating in the modern world for a long time and have transformed human life from a rat-race for bread and butter into civilized norms of behaviour and cultural satisfaction. The impact of technological changes is being felt in the developing countries also but the rate of assimilation is often very slow and the process somewhat exasperating.

"The multiversities of today are straight-line projects of the machine-model colleges and universities of the industrial era. However, through its own technology and its techniques for accelerating technological innovation, the industrial system has begun to transform itself. A new cultural system is emerging. The new electronic technologies (and soon new biological, nuclear and solar technologies) are not only dramatically altering society, but are further accelerating the rate at which new changes come about. In less than a half-century, the airplane changed the rules of warfare, politics and business. The time from Rutherford's discoveries about the atom to Los Alamos and Hiroshima was only thirty-five years. The first landing on the moon occurred less than a decade after the test-run of solid-fuel missiles. How far away is the fusion of man and machine, now that artificial organs, hormone producers and transistorized brain supplements are a reality in the laboratory? The advances of science have been and will continue to be beneficial to women if necessary social adjustments are made and social values are not discarded. It is in this context that the remarks of Pandit Nehru are important: "What we need is science and spirituality, because religion and politics based on economics have done immense harm to the world"....

"One may ask the question — what is the future of this University? All education is commonly regarded as education for the future. To quote the Hon'ble Prime Minister, Smt. Indira Gandhi: "Education is not merely in accumulation of knowledge for knowledge can soon be out of date, but a means of stimulating the capacity to think, to learn and to innovate and to apply knowledge in the interest of larger causes. When education was limited to a privileged few, people were mere consumers of the thoughts of others. Now when we seek widest involvement of the people in shaping their destiny, the young must be encouraged to do their own thinking."

"The University has important tasks to perform. First, it has to open up new fields of learning so that the horizons of women folk must expand, the frontiers of their efforts would be widened and women will be able to meet the challenges of life. Secondly, these new fields must be so structured that the options are open to them to puruse their education, taking into account that women have to play a dual role in life — that of profession and that of family life. There is a need for continuous monitoring the educational process through restructured curriculum, examination reforms, continuing education and the re-organisation of knowledge to put greater emphasis on instrumentalism in scientific and technological spheres and greater stress on expressiveness in the humanistic and artistic realms. Further the whole pattern of the educational system must be so designed as to permute over the entire life span of a woman with free movement between family responsibilities, study and work. Thidly, it has to play a leadership role in the field of women's education, particularly at the time when other women's universities are being set up in different parts of the country.

Permit me to share with you my credo developed through my occupational activities in the sphere of education. I feel strongly that the educational status of a nation can be recognised by the academic status of its teaching faculty in all the stages of its educational ladder. I may mention though the enrolment trend of women in University education is near about 37%, their opting for teaching profession is very poor. In Primary Schools the percentage is only 26%, in the middle school it is 36%, in High Schools it is 30% and in the Colleges and the Universities it falls only to 15%. These percentages are broadly for the whole of India. If I were to confine my attention only to Women's University, the picture looks rosy since in all the faculties both in conducted & affiliated colleges in Maharashtra & Gujarat, the percentage of women teachers is nearly 76%. However, I must add some of your faculties are the special preserve of women like Nursing and Home Science. Since I am addressing the young graduates in different faculties I strongly urge some of them to think about preparing themselves to pursue the profession of teaching.

"Before I conclude, I would like to address a few words to my young friends. You stand at the pinnacle of life and you can be a channel for mighty streams of power. You are heir to the great thoughts of thinkers of the ages; you are heir to more accumulated knowledge and experience than man has ever before possessed. Dream great dreams. Great dreams become obsession which should not be denied. If you are willing to pay the price, you can make your dream come through. By travelling fearlessly and patiently, with curiosity, imagination and an open mind stamped with humility and courtesy, achieve the dreams.

"Now and then, not often", wrote Emerson, "the man forgets himself into immortality". You must change your mind to change your world....." □

ASSOCIATION OF INDIAN UNIVERSITIES

Correspondence Courses

Applications are invited from college/university teachers for admission to three **Correspondence Courses in Evaluation Methodology And Examinations** at Basic, Intermediate and Advanced levels of six months duration from 1-4-1984 to 30-9-1984. Basic level course is offered from Regional Centres at Delhi, Bombay and Madras. A personal 'Contact Programme' for three days is planned and prescribed books will be supplied to every candidate.

Requests for prospectus and application forms accompanied by a crossed Indian Postal Order for Rs. 5/- drawn in favour of Secretary, Association of Indian Universities, and a self-addressed stamped envelope (Re. 1) should reach the undersigned. Last date for receipt of application in the prescribed form is **15th March, 1984** for non-sponsored candidates and **30th March, 1984** for sponsored candidates. For sponsored candidates, Universities/Institutions can pay the course fee and travel expenses for contact programme from UGC unassigned grant.

Project Director (Examinations)
Association of Indian Universities,
6 DDA Building, Nehru Place
New Delhi-110019

Quakerism, Hinduism and Gandhi's Ideas on Religion

Mr. John Linton, Quaker Leader from Great Britain delivered a special lecture on "Quakerism, Hinduism and Gandhi's Ideas on Religion" on February 18, 1984 at Gandhigram Rural Institute (Deemed University). Dr. M. Aram, Vice-Chancellor presided.

Recalling the words of Dr. C.E.M. Joad that it all depended on what you meant by religion, Linton reiterated that religion might transcend reason, but should not contradict it. True religion is not a matter of indoctrination with dogmatic beliefs but an acceptance of spiritual values.

His unquestionable faith in 'openness and absence of dogma' has drawn him towards the 'Society of Friends' in which his universalist convictions aroused a warm response. This paved the way for the birth of Quakers Universalist Group. The Quakers Universalist Group firmly believes, he asserted, the declared view of Gandhi that no religion is a final revelation or has a monopoly of truth. Revelation is a continuous process. Moreover, though there may be a divine spark in them, the historic religions are essentially man-made. They are man's attempt to get to grips with the eternal verities.

The search for truth is continuous. All the historic religions have always been divisive because they make unacceptable claims causing bitterness, war, and terrible crimes against humantiy. He also felt that different religions should forget their differences and co-operate with each other for spiritual self-evaluation.

Though the Quakers' stand on some critical issues may initially seem to be unpopular, Dr. M. Aram, Vice-Chancellor in his presidential address said, their pioneering efforts would eventually help the society.

All religions lead to the same supra-mental experience. But due to the abundant liberalism and freedom which the Hinduism offers, it has more possibility for such spiritual experience. Dr. Aram emphasised the view of Vinobha Bhave that the core of religion is spirituality. According to Vinobaji, the era of religion and politics is over and the era of science and spirituality has begun. We should be the seekers of a new territory based on Truth which must be an experience of our own, he suggested.

Adult literacy programmes at Gujarat Vidyapith

The Department of Adult, Continuing & Extension work of the Gujarat Vidyapith, Ahmedabad has adopted 8 Village complexes including two tribal villages for implementation of Adult Literacy Programme under the 20-Point Programme of Government of India. 170 adult literacy classes were launched on 22nd February, 1984, the birth day of Kasturba Gandhi.

Five experts from various Universities of Gujarat helped in the formulation of the curriculum at two-day workshop which was held on 9th & 10th December, 1983

The training of Instructors (First Phase) was conducted from 11th January, 1984 to 16th January, 1984 at Ambheti Gram Seva Kendra in Tribal area, Dist. Valsad, (South Gujarat in the extension centre of the Gujarat Vidyapith) 30 Instructors were trained. Similarly the training of Supervisors (First Phase) was conducted from 1st February, 1984 to 7th February, 1984. 16 Supervisors for 160 classes were trained in the Ahmedabad Campus of the Gujarat Vidyapith. Another training programme for Instructors (First Phase) was conducted from 10th February, 1984 to 16th February, 1984 at Gujarat Vidyapith. 70 Instructors were trained.

The Gujarat Vidyapith runs the State Resource Centre for Adult Education and has published over 90 publications in local language for neo-literates. Prof. Ramlal Parikh, Vice-Chancellor of the Gujarat Vidyapith is the Chairman of the Advisory Committee of the Programme. Addressing the training programme of Supervisors, he pleaded for abolition of supervisory attitude and adopt fraternal approach to Adult literacy programme which should primarily focus on motivating the people by house to house contact.

Facilities for research at Delhi University to receive a boost

Delhi University is likely to get Rs. 10 crores including $ 3 millions in Japanese aid for purchase of latest equipment which would be useful in research and training and also other facilities.

Under an agreement of cooperation with the Government of India, Japanese aid will come through to Delhi University as part of the special assistance for scientific research development and training.

The new sophisticated equipment to be received by the Delhi University will be initially located in the Instrumentation Centre of the university in the north campus. Later, a central complex is proposed to be built exclusively for the Centre. This central core science facility will be available for all the departments of the university. This is intended to avoid duplication in instrument purchases, their use and maintenance.

The UGC is also reported to have sanctioned Rs. one crore for the purchase of fourth generation computer for the university.

For upgrading the present advanced centres in the university (Chemistry, Physics, Botany and Zoology), the UGC has sanctioned Rs 2 crores. A new Department of Electronics Science at a cost of Rs 60 lakhs will also be set up. The UGC, it is reported, has also agreed to give Rs. 1.25 crores for creating laboratory facilities in the South Delhi Campus of the university.

The UGC has also agreed to

give funds for the construction of 300-seat hostel for the university of which 100 seats will be for the South campus. The Social Welfare Ministry is also giving a grant for the construction of a hostel for disabled students.

UGC grant for Calcutta University

According to reports appearing in the Press, the Vice-Chancellor of Calcutta University, Dr. Santosh Bhattacharya, revealed that the University Grants Commission had agreed to increase the Sixth Plan allocations for Calcutta University from Rs. 1 crore to about Rs. 1.30 crores.

Workshop on Sanskrit literature

A 5-day workshop was recently concluded at the Sanskrit Department of Patna University. The workshop was organised by the National Council of Educational Research & Training. Its aim was to prepare small and easy editions of famous Sanskrit texts for use of school students and learners of Sanskrit and creating an interest and love for Sanskrit.

Prof. P.N. Kawathekar, ex-Vice-Chancellor of the Vikram University, Ujjain and at present Chairman of the Central Sanskrit Board while addressing the participants of the workshop emphasised the importance of bringing out simple books for promotion and propagation of Sanskrit learning in the country.

Saurashtra Varsity organises reading camp

The Saurashtra University organised a Reading Camp at Senior Lokshala, Samana in Jamnagar District where the students from all the affiliated colleges were invited to participate in the camp. This camp was organised for a week during December 1983. The idea behind organising this camp was to lead the students in the direction of reading classical books and to develop the habit of reading and thereby cultivate the hobby of reading good books.

Shri Dhirubhai Dobaria, Students Welfare Officer of this University in his inaugural speech stressed upon the importance of reading books which enlighten the minds of the students. The habit of reading develops one's personality. Dr. Balvant Jani, Reader, Gujarati Bhasha Sahitya Bhavan of the University and the organiser of this camp also laid emphasis on the importance of reading and the method of reading. He also gave an idea as to how the camp was being organised during the period. The students were required to be ready by seven-thirty in the morning and were required to read the book from eight to twelve. After lunch and rest, they had to read from three to seven. From eight-thirty onwards the students had to give a talk on the book read by them. The organiser also used to explain the special features of the books which were discussed. He also used to give lectures on the literary works of Sartre, Tagore, Hazariprasad Maitreyidevi, etc.

The students thus got the opportunity of reading, understanding, writing and also expressing what had been understood. The students got acquainted with about twenty books everyday because each student listened to what another student had read. When they departed at the end of the camp, each student thus got acquainted with about sixty to seventy books.

There was enthusiastic response from students who desired that such camps should be organised frequently.

H.S. Gour Varsity workshop on revision of B.Ed. syllabus

The Faculty of Education of Dr. Hari Singh Gour Vishwavidyalaya, Sagar, organised a workshop on revision of B.Ed. Syllabus in the University College of Education under the directorship of Dr. S.P. Ahluwalia, Professor and Dean, Education from February 13 to 17, 1984.

The workshop was inaugurated by Shri M.B. Malhotra, Vice-Chancellor, who highlighted the role of the teacher in the emerging Indian society and clarified the need for strengthening and updating programmes of teacher-preparation in the State of Madhya Pradesh.

More than twenty five senior teacher-educators of the affiliated colleges and universities located at Indore, Gwalior, Ujjain, Bhopal and Sagar participated in the Workshop. The Valedictory Address was delivered by Dr. H.S. Asthana, former Vice-Chancellor and Head of the Department of Psychology, University of Saugar. Dr. Asthana suggested how teacher education can be radically reformed. He pleaded that the Boards of studies in Education and the Faculties of Education had to play an important role in streamlining the teacher preparation courses. Dr. K.N. Saxena, Professor and Incharge, Department of Teacher Education, NCERT, New Delhi and Professor B.N. Pandey, who retired from NCERT, acted as Resource Per-

SPECIAL CONTRIBUTIONS FOR AIU HOUSE CONSTRUCTION

We wish to share with our readers the happy news that the following special contributions have been received for the construction of our new building, AIU HOUSE, and more contributions are on the way:

Government of Maharashtra	Rs. 2,00,000
Madurai Kamaraj University	Rs. 1,00,000
Panjab University	Rs. 1,00,000
Banaras Hindu University	Rs. 1,00,000
Avadh University	Rs. 20,000
Delhi University	Rs. 20,000
Indian Institute of Technology, Delhi	Rs. 20,000

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sons for the Workshop. The Workshop suggested changes in the areas of pedagogical theory, working with community and SUPW, and Content-cum-methodology courses for teaching school subjects.

Osmania organises seminar on population education for degree colleges

Sponsored by the University Grants Commission, New Delhi, a three-day interdisciplinary seminar was organised in the College of Education, Osmania University, during 9-2-1984 to 11-2-1984. State Minister for Health, Shri S. Rama Muni Reddy, inaugurated the Seminar, while Shri Syed Hashim Ali, Vice-Chancellor, Osmania University presided. Forty lecturers from degree colleges from the Districts where rate of population growth during 1971-81 was much higher than National average and the average of Andhra Pradesh participated.

Departments of Economics, Psychology, Sociology, Microbiology and Chemistry of the Osmania University and the Directorate of Medical & Health Services and the Directorate of Higher Education of the Governmen of Andhra Pradesh, besides Population Education Forum, provided the necessary expertise for the Seminar. A unique feature of the seminar was having a Technical Session on "Population Growth, Ecology and Environmental Pollution", chaired by Prof. T. Navaneeth Rao, Rector, Osmania University and was addressed by Member Secretary, Pollution Control Board. Scientists from NEERI, Birla Institute and others addressed the seminar.

The meaning and scope of population education, causes and consequences of rapid population growth, maternal and child health, conception and contraception, role of degree colleges in popularising population education among youth (the potential parents) were discussed and a design for follow up activity was prepared. Dr. S. Anjaneya Sarma, Additional Director, Medical & Health Services, Andhra Pradesh, and Sri M. Gopalakrishnan, Secretary to Government, Food and Agriculture addressed the valedictory session.

PAU staff appeals for communal harmony

A joint meeting of the teachers and non-teaching employees of the Punjab Agricultural University held recently under the Chairmanship of Dr. Sukhdev Singh, Vice-Chancellor has strongly appealed to the people of both Punjab and Haryana to maintain communal harmony in the wake of present wave of violence. The meeting strongly condemned the killing of innocent people and sacrilege of places of worship in Punjab and Haryana and urged the State and Central Governments to severely deal with those found guilty of such acts. The meeting appealed to the secular forces to come forward and take care of minority communities.

The meeting adopted the following resolutions:

(1) Peace march by Senior teachers should be organised in the troubled areas to restore confidence among the people.

(2) The religious readers of both the communities should be requested to prevail upon their followers to maintain peace and cordial atmosphere.

(3) The students should also be involved in a big campaign to restore peace and normalcy in the affected areas and to create good-will among various sections of the society.

Bharathidasan Varsity constitutes task forces for curriculum development

To develop and design courses and curriculum relevant to the needs of the students and the society, as recommended in the document "Ten Year Plan Perspective—A Policy Frame" the proposals of which were approved by the Planning Board of the Bharathidasan University, the Vice-Chancellor of the university has constituted five Task Forces the following (i) Medical, Health and Life Sciences; (ii) Physical and Engineering Sciences; (iii) Agriculture including Farm & Dairy Sciences; (iv) Commerce including Management Sciences; and (v) Languages, Humanities and Arts including Fine Arts and Social Sciences.

The Chairman of each Task Force will form a Committee of Experts for the purpose of working out the details of curriculum, etc. The courses and curriculum as designed and developed by these Task Forces will be inter-institutional and inter-disciplinary in content and character, it is hoped.

In the meanwhile, the colleges of this University area have been requested to send proposals identifying courses, at all levels, depending upon the infrastructural facilities available and the proposals received from the colleges will be placed before the Task Forces for their consideration.

IAS coaching centre for SC/ST students at Karnatak University

An exclusive coaching centre to train Scheduled Caste Scheduled Tribe students for all India Competitive examinations has begun to function at Karnatak University, Dharwad. This Centre has been financially assisted by Government of India. Under the scheme, 25 SC/ST students would be given intensive training by experts. The candidates will also be provided with residential accommodation. Dr. D.B. Hanumiah, Reader in

A Vice-Chancellor fines himself

There was a unique incident of a Vice-Chancellor fining himself for a lapse. Dr. D.M. Nanjundappa, Vice-Chancellor, Karnatak University recently fined himself and paid Rs. 100/- to the University when he found that he had committed a slip while registering his note on a petition submitted by a student of the University.

Physics, has been nominated Director of the Coaching Centre.

There is also a separate SC/ST Cell functioning in the University looking after the needs and welfare of SC/ST students.

This centre will be in addition to the IAS Coaching Centre which the university has been running for several years.

Rashtrasant Tukdoji College's involvement with community

The Rashtrasant Tukdoji College, Chimur which is affiliated to Nagpur University and which is located in the backward tribal District of Chandrapur, undertook some novel schemes this year, for the benefit of the staff, students and the community around.

A Lecture series on Youth & Health by Dr. Gajbhiye, was arranged which was inaugurated by Principal V.C. Kumaran who emphasised the vital role of College youth in the area of health, hygiene and sanitation. In a series of 12 lectures Dr. Gajbhiye made the subject interesting, informative and inspiring to the students of the Arts & Commerce faculties.

During the annual social gathering of the College an exhibition on "Development of Chimur Panchyat Samiti" was jointly organised by the Local Block Development Officer's office and the planning forum of the college which was inaugurated by Shri Vilas Muttemwar, M.P. A Melawa of Sarpanchas, farmers and social workers was also held on the occasion which enabled them to discuss developmental problems with the Member of Parliament, the Deputy C.E.O. and other concerned officials of Chimur Panchayat Samiti.

A ten-day camp arranged by the N.S.S. Unit of the College at village Yerkheda and three nearby villages enabled the volunteers to organise diagnostic camp, mass scale immunisation and health survey. Removal of encroachments, starting of Anganwadis and Mahila Mandals and other socially useful programmes were undertaken during the camp.

A study tour of the N.S.S. volunteers of the College was arranged in collaboration with the Social Forestry Deptt. to study the various social forestry

CALENDAR OF EVENTS

Proposed dates of the Event	Title of the Conference/Seminar/Symposium/Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks (Chief Guest, Keynote Lecturer etc.)
March 10-12, 1984	Second Indian Journalism Congress	To discuss the follow-up action of NAMEDIA and also new method of training in Journalism	Department of Journalism & Mass Communication, BHU Varanasi.	Prof. A.K. Banerjee Head, Deptt. of Journalism & Mass Communication, BHU, Varanasi.	About one hundred journalists & academicians are expected to participate.
March 10-11, 1984	Executive Development Programme on Developing Effective Organisation	To enable the participants to have fresh look at the managerial job in terms of results and to make them aware of their assumptions about themselves. The programme is expected to provide guidelines that could contribute to the efficiency and effectiveness of the organisation.	Department of Business Management, Devi Ahilya Vishwavidyalaya, Indore.	Shri S.K. Dhawale, Programme Coordinator, Department of Business Management, Devi Ahilya Vishwavidyalaya, Indore.	Participation restricted to 30 participants
March 15-20, 1984	First International Conference on Literature in Translation—The role of foreign languages in the cross cultural communication	To investigate the possibilities of a close interaction between the different Indian and foreign languages and their literatures in the form of translations of various literary and academic works and to throw light on the role of foreign languages in the context of cross-cultural communication	School of Languages, JNU, New Delhi	Prof. Pramod Talgeri, Director ; and Dr. S.B. Verma, Organising Secretary	To be inagurated by the Prime Minister, Smt. Indira Gandhi.

programmes in Chandrapur Distt.

The College has started raising a nursery with the guidance and cooperation of the Social Forestry Deptt. The saplings will be distributed to the needy farmers during the next rainy season.

Rural publishing programme at HAU

The Directorate of Publications of Haryana Agricultural University, in collaboration with the National Book Trust, has launched an innovative programme in Rural Publishing for the neo-literate and semi-literate persons from rural areas.

The project is specially meant for the rural people to inculcate the reading, writing and illustrating habit among them with the direct involvement of the rural people themselves. Colourful booklets written and illustrated by the rural writers and illustrators on topics of special interest to the rural people dealing with topics of general knowledge, culture, social and national importance, as well as subjects of vital importance to rural life are selected for publication in these surveys and pre-tested before the intended audience in workshops, in both of which the rural people, literate, semi-literate, neo-literate and illiterate participate. These booklets are written in very simple language and are made available at unit cost.

The programme, duly approved by the Vice-Chancellor of the university comprises two stages : On-the-spot survey and research of reading habits and workshop.

It is hoped that the booklets, profusely illustrated and written in simple language would be available by April-end.

No new arts colleges in Tamilnadu

The Education Minister of Tamilnadu, Mr. C. Aranganayakam, recently announced in the State Assembly that the Tamilnadu Government had decided not to open any further arts colleges for the present. This decision has been taken keeping in view the unemployment among graduates. At present in Tamilnadu there are facilities for study of arts courses in the evening colleges and through correspondence courses also.

Indo-Soviet seminar

A 2-day Indo-Soviet seminar on "Various Facets of Education in India and USSR : Aims, Achievements and Perspectives" was recently held at New Delhi. The seminar was organised by the Indo-Soviet Council for Child Development in collaboration with the Cultural Department of the USSR Embassy in Delhi.

Inaugurating the seminar the Union Minister of State for Education, Smt. Sheila Kaul, stressed the need for redesigning the education system in the country with a view to integral development of personality.

AU introduces cartoon drawing course

The Department of Adult and Continuing Education of the Andhra University is conducting a "Cartoon Drawing Course". The course will be of one month duration. The course would include Head anatomy, Walking, Jumping, Running, Gag Cartoons, Cartoon strip, etc.

News from Agril. Varsities

Symposium on utilization of farm wastes

Dr. Sukhdev Singh, Vice-Chancellor of the Punjab Agricultural University said that with the agricultural revolution, the disposal of agricultural residues like paddy straw and wheat straw had posed a problem for the farmers. He further said that more than 5 million tonnes of paddy straw was burnt in the fields annually which had become a serious pollution problem. This could be used for card board making. The Vice-Chancellor further said that huge quantity of rice bran was used as fuel in same factories which could otherwise be used for de-oiling and poultry feed.

The Vice-Chancellor was inaugurating a symposium on utilization of agricultural wastes at the P.A.U. The seminar was organized by the Department of Biochemistry of the University and sponsored by the Council of Scientific and Industrial Research and the local chapter of Society of Biological Chemists (India). More than 100 delegates attended this symposium.

In his keynote address, Dr. B.S. Pathak, Professor of Eminence at the PAU said that one of the notable achievements of the engineers and scientists of the developed West in the last two decades had been the emergence of the non-waste technology which provided for the utilization of the process by products, often resulting in long sequential use chain. He further said that what was utilized was not a waste. In that sense, Indian agriculture had been an outstanding example of non-waste technology. All agricultural residues had been almost fully utilized for one or more purposes and till recently there were practically no agricultural wastes. He further said that wheat straw which had posed a problem of disposal in the post World War agriculture of many European countries was still a valued roughage in this country. That part of it which was not digested by the cattle and was rejected as dung was in fact used as a value added material for manure and fuel. Only in the recent years some agricultural residues had become truly surplus and were being treated as wastes.

Dr. Pathak said that there were three major biomass conversion processes which can be adopted to utilize agricultural residues for energy purposes. These were combustion process, thermochemical process and fermentation.

Need to increase the efficiency of tubewells

Inaugurating a seminar on "The problems of pumping sets manufactured in Punjab" Dr. Sukhdev Singh, Vice-Chancellor of the Punjab Agricultural University said recently that Punjab having only 1.53 per cent of the total geographical area of the country had 6.7 lakh tubewells which was 80 per cent of the total tubewell population. He further said that 55 per cent of the cropped area in Punjab was irrigated by the tubewells installed by the farmers by spending more than Rs. 700 crores. In spite of this huge investment, the efficiency of these tubewells was not satisfactory, he added.

The Vice-Chancellor called upon the manufacturers of irrigation machinery to produce equipment which was durable, economic and efficient. He urged the manufacturers to observe strict quality control for each and every part of their product, properly educate the farmers on the operation, care and maintenance of the pumpsets and provide efficient after sales service to the farmers.

The seminar was organised by the Department of Soil and Water Engineering of the PAU in collaboration with the Punjab Chapter of Indian Society of Agricultural Engineers. More than 100 representatives of Industries and Agricultural Departments of Punjab, Pumpset manufacturing concerns, Commercial Banks and farmers participated in it.

Dr. S.R. Verma, Dean of College of Agril. Engineering of the PAU said that one-third of the tubewells in the State were operating at an efficiency of less than 40 per cent, one-third of them with an efficiency of 40 to 50 per cent and remaining one-third at efficiency higher than 50 per cent. Dr. Verma explained that improper selection and installation of pumps, poor quality driving belts, improper size ef suction and delivery pipes, defective reflex valve, sharp bends in the piping system, leaking joints and poor maintenance were the causes of low efficiency.

News from Abroad

Educational robot developed in Australia

An Australian electronics company has played a major role in developing an educational robot.

The robot, known as Elami, 90 cm (35″) tall, will respond to human speech, move around, play games and music and help children with spelling and mathematics. It was the idea of the RE Foundation in Zurich, a non-profit education research institute which did not have the technology to develop it fully and approached the electronics company in Australia

The robot, selling in basic form for under $1000, includes a micro-computer, a device which gives it preprogrammed speech, disc drives, printers, games cartridges and a battery for self-propulsion.

Elami, it is said, would help teach children about the basics of the computers and robotics so that they could cope better with changing technology.

Impetus for higher education in China

China, it is reported, is giving impetus to postgraduate courses along with expanding collegiate education. This was disclosed by Mr. Yang Le, Vice-President of the All China Youth Federation recently. Mr. Le is heading a 3-member All China Youth Federation delegation which is on a short visit to India. At present China is providing only about 50,000 seats in different colleges in the country. He further disclosed that China was increasing its budgetary allocations for education at the school level and for equipping research laboratories. Mr. Le is also the Deputy Director of the Research Institute of Mathematics of the Chinese Academy of Sciences. He said that Chinese mathematicians had done a lot of work on the theory of numbers and function theory.

Para-psychology Chair at Edinburgh University

Britain's first Chair in Parapsychology to be funded by the estate of Sir Arthur Koestler and his wife Cynthia will be established at Edinburgh University. It is reported that the Koestlers have left £500,000 for the establishment of University's Chair to advance the study of psychic phenomena.

We Congratulate...

1. Prof. K.J. Mahale who assumed charge as Vice-Chancellor of the Manipur University for a period of five years on February 22, 1984.
2. Dr. D.M. Nanjundappa, Vice-Chancellor, Karnatak University who has been nominated Honorary Chairman of the Karnataka Pre-University Board.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

HUMANITIES

Philosophy

1. Bose, Hena. *A study in the Puranas and their importance in Hindu thought and religion*, Bihar U, Muzaffarpur.

2. Gupta, Nivadita. *Geeta, Kant aur Vivekanand ke niti darshan mein gyan aur karam ka samanvya*. RSU, Raipur.

3. Iguatius, I. Maria. *Historising as a method for a new philosophical understanding of the problem of religious language*. U Poona.

4. Jaladhar Pal. *The moral philosophy of Gandhi*. U Calcutta.

5. Krishna Rao, Sujatha. *Problem classification, problem genesis and problem definition in the sciences*. SVU, Tirupati.

6. Nirmala Devi, D. *Concept of nature in Indian thought*. Calicut U.

7. Pandey, Ram Das. *Astitvavad mein tarkna evam pratibhavan ka sthan*. Kanpur U.

8. Prasad, Chandar Narayan. *Srimad Bhagvad Geeta aur Dhampad ke naitik evam samajik siddhanton ka tulnatmak adhyayan*. RSU, Raipur.

9. Sakata, Harish Chandra. *A critical study of Carnap's logical foundations of probability*. U Raj, Jaipur.

10. Siddeswara Prasad, K. *The problem of induction in Indian logic with special reference to nyaya,-vaisesika system*. SVU, Tirupati.

11. Singh, Vidya Sagar. *Charvaka aur Hume: Ek tulnatmak darshnik adhyayan*. Bihar U, Muzaffarpur.

Fine Arts

Drawing & Painting

1. Anand, Soami Pyari. *Avadh kee lok chitrakala ka adhyayan*. Kanpur U.

2. Asthana, Madhu. *Raja Sansar Chander ke sanrakshan mein viksit pahari chitrakala ka dharmik evam sanskritik adhyayan*. Kanpur U.

3. Gupta, Anju. *Ajanta tatha Bagh chitron ke bhav paksha ka tunlnatmak adhyayan*. Kanpur U.

4. Gupta, Pushpalata. *Rajasthani lok chitrakala ka Bhartiya adhunik chitrakala per prabhav*. Kanpur U.

5. Nigam, Rekha. *Garhwal shaili ke chitrakar Molaram ka adhyayan*. Kanpur U.

Music

1. Lahiri, Chandana. *Structural patterns of Misra-Ragas with reference to their artistic design*. RBU, Calcutta.

Language & Literature

English

1. Asit. *The personal element in T.S. Eliot's poetry*. Kanpur U.

2. Awasthi, A.K. *Social content in the novels of Erskine Caldwell*. Agra U.

3. Chatterjee, Chandra. *The world within : A study of novels in english by Indian women 1956-1980*. IIT, Delhi.

4. Dixit, R.K. *E.E. Cummings as a deviant poet*. Bhopal U.

5. Joshi, M.R. *A Critical study of Emerson as a poet*. Bhopal U.

6. Man Mohan Lal. *Elizabeth Gaskell, the novelist with special reference to the impact of the industrial revolution on her novels*. Kanpur U.

7. Nand Lal. *Thoreau and Gandhi: Quest for moral life*. Pb U, Chandigarh.

8. Pandey, S.C. *The novels of Raja Rao : A study of his philosophical and mystical themes*. Kum U, Nainital.

9. Puranik, V.P. *A psychological study of Shakespeare's four great tragedies*. Devi Ahilya, Indore.

10. Thomas, Helen Reid. *The woman's point of view : A study of the self-understanding english novel from Gissing to Margaret Drabble*. Agra U.

Sanskrit

1. Acharya, Prabha. *Mahakavi Viranandi krit Chandra Prabhcharitam: Sahityik adhyayan*. Avadh U.

2. Chandra, Mandvi. *Pauranik kavyashastra tatvanusheelan*. Avadh U.

3. Chandra Prakash. *Mudrarakshas ka natya shastriya adhyayan*. Avadh U.

4. Gour, Saroj. *Bhavbhuti tatha unki kritiyon ka tulnatmak manovaigyanik adhyayan*. Kanpur U.

5. Gujarati, Prem Krishna. *Govadhancacharya krit Aryasaptshati tatha Sri Visheshwer Pandey krit Aryasaptashati ka tulnatmak adhyayan*. Kanpur U.

6. Madhav Raj. *Gunibhut vyangya: Sidhant aur lakshya*. Avadh U.

7. Mirasdar, Mangala H. *The political ideas in the Panch mahakavyas*. U Poona.

8. Mishra, Jagdish Prasad. *The contribution of Ashadara Bhatta to sanskrit poetics*. U Delhi.

9. Mishra, Nand Kumar. *Janki Harnam ka kavya shilpa*. Mag U, Bodh Gaya.

10. Mishra, Om Shankar. *Atharvveda mein Ayurveda*. Kanpur U.

11. Mishra, Sudhakar. *Mahakavi Ashwaghosh ke kavyon ka darshnik adhyayan*. Avadh U.

12. Mohapatra, Haripriya. *Study on Vasantotsava Mahakavya*. Utkal U, Bhubaneswar.

13. Pandey, Bhaskranand. *Bhartrharikrta Vakyapadiya mein sadhana evam Kriyasamuddes ka alochanatmak adhyayan*. U Delhi.

14. Pandey, K.K. *Kumaun ke sanskrit Kavi Gumani: Vyaktitva evam krititva*. Kum U, Nainital.

15. Parashar, Shashi Prabha. *Shastriya granthon kee Acharya Vishweshvar krit vyakhyaon ka saidhantik adhyayan*. Agra U.

16. Pathak, Meenaben Pinakinbhai. *Taittiriya Upanisad: A study*. MSU, Baroda.

17. Rai, Narmadeshwar. *Bhartiya astik darshnik vangmaya mein trigun swarup evam manav jeevan mein uski upyogita*. Kanpur U.

18. Shukla, Shiv Baran. *Chakrapani Vijaya Mahakavya: Ek sameekshatmak adhyayan*. Kanpur U.

19. Thakur, Shyampada. *Epic study: Vidura, his prajnadarsana and its impact on post-epic literature*. **D. Litt.** U Burdwan.

20. Verma, Tekram. *Mahakavi Ashvaghosh ka shabad paripak*. RSU, Raipur.

Pali

1. Singh, Bhupendra Nath. *Vinay kaleen Bhartiya sanskriti, kewal Vinay Pitak per adharit*. Mag U, Bodh Gaya.

Punjabi

1. Amarjit Singh. *Concept of man in punjabi qissa kav*. Pb U, Chandigarh.

2. Chawla, Harbans Singh. *Gurbani vich samkali samajak chitar*. U Delhi.

3. Mallhi, Nachhatar Singh. *Punjabi vich parachi sahit*. Pb U, Chandigarh.

Hindi

1. Acharya, Shambhu Nath. *Bhartiya sanskriti kavya: Parampara evam prayog ke aalok mein Ayodhya Singh Upadhyaya Hariaudh*. Kanpur U.

2. Agnihotri, Ram Gopal. *Samsamyik jeevan mulyon ke pariprekshaya mein adhunikaleen hindi kahani ka tatwa darshan, beesvin shatabdi ka uttarardh*. Kanpur U.

3. Agnihotri, Satyanarayan. *Nirala kavya mein kalpana saushthav*. Kanpur U.

4. Agnihotri, Shashi Kant. *Adhunik hindi kavya mein pauranik akhyan*. Kanpur U.

5. Ahirwal, Param Lal. *Mandala Jile kee vyavsayik shabdavali ka bhasha vaigyanik adhyayan*. HS Gour, Sagar.

6. Bakshi, Girish Chandra. *Munshi Prem Chand aur Tarashanker Bandhyopadhyay ke upanyason ka tulnatmak adhyayan*. U Delhi.

7. Bhardwaj, R.C. *Tulsi kee Geetavali ka bhasha vaigyanik anusheelan*. Agra U.

8. Chaturvedi, Virendra Dev. *Farrukhabad Janpad ka hindi sahitya ke vikas mein yogdan*. Kanpur U.

9. Chauhan, Raghu Nath Singh. *Rahim aur Raskhan ke hindi kavya sahitya ka tulnatmak adhyayan*. Kanpur U.

10. Chauhan, Vidya. *Adhunik hindi sameeksha ke prati vartman sameeksha mylyon ka alochnatmak anusheelan*. **D. Litt.** Kanpur U.

11. Dadhich, K.J. *Gorkha Bani aur Kabir Granthavali ka tulnatmak adhyayan*. Devi Ahilya, Indore.

12. Deshmukh, Sheela Prabhakar. *Social analysis of post independent hindi novels written by women writers*. Shivaji U, Kolhapur.

13. Dube, Nutan. *Premchandottar upanyason ka bal manovaigyanik adhyayan*. Kanpur U.

14. Dube, Usha Bala. *Swatantrayottar hindi kahani mein vyaktivad*. Agra U.

15. Garg, Pushpa Rani. *Dinker ke gadya sahitya ka vivechnatmak adhyayan*. Devi Ahilya, Indore.

16. Gautam, Ajay. *Hoshangabad Jile kee Gondi ka bhashik anusheelan*. Bhopal U.

17. Ghorpade, Padmaja S. *Swatantrayottar hindi kavita mein pranya chitran*. U. Poona.

18. Jagdish Prasad. *Mahakavi Shiv Ratan Shukla "Siras" aur unki hindi sahitya ko den*. Kanpur U.

19. Jalaja, V.S. *Sohanlal Dwivedi ka kavya*. U Cochin.

20. Jauhari, Uma. *Krishan bhakti ke sandarbh mein Musalman kaviyon ka kavya*. Kanpur U.

21. Jha, Ram Chandra. *Maithili sahityik vikas ke vishisht sandarbh meim Swargiya Rajeshwar Jha Maithili kritik adhyayan*. Mag U, Bodh Gaya.

22. Joshi, Jay Kumar. *Hindi kahani mein vam chetna*. Vikram U, Ujjain.

23. Kamal, Kumud Kumar. *Mudrit hindi sahitya kee 1828 se 1978 tak prakashit granthputiyon evam pralekhan soochiyon ka alochnatmak adhyayan*. LNMU, Darbhanga.

24. Kanumuri, Sarojini Devi. *A study of Gulab Rai: Life and works*. Andhra U, Waltair.

25. Mishra, Krishan Kumar. *Awadhi tatha maithili lok geeton ka tulnatmak adhyayan*. Kanpur U.

26. Mishra, Pratibha. *G.P. Shrivastava: Vyaktitva evam krititva*. Kanpur U.

27. Mittal, Sunita. *Kanpur Janpad ke Marxvadi kaviyon kee pragatisheel chetna ka sahityik adhyayan*. Kanpur U.

28. Mohammad Ibrahim. *Roop varnan kee Bhartiya evam Pharsi parampara tatha Jaysi*. Avadh U.

29. Padmaja Devi, G. *Satthottar hindi upanyason mein yuva peedhi*. SVU, Tirupati.

30. Pandey, Kapil Dev. *Hindi sahitya ke itihas kee pravrittiyon ka itihas: Darshan ke pariprekshya mein anusheelan*. Kanpur U.

31. Pandey, Radha. *Bimb nirman ke pariprekshya mein Dinkar kee kavya pratibha ka anusheelan*. Avadh U.

32. Pandey, Ram Chandra. *Ram Charit Manas mein Vedic vangmaya ke viniyog*. Bihar U, Muzaffarpur.

33. Pandey, Sarojini. *Hindi sahityotihas ke strot*. **D. Litt.** Kanpur U.

34. Pandey, Sudha Rani. *Hindi natkon mein prachin Bhartiya sanskriti ka vivechnatmak adhyayan*. **D. Litt.** Kanpur U.

35. Pathak, Bal Chandrika. *Shri Ramcharit Manas tatha Shrimad Bhagwat: Sanrachna evam lakshya ka tulnatmak adhyayan*. **D. Litt.** Agra U.

36. Pathak, Chandra Prakash. *Athven dashak ke hindi upanyason mein istri purush ke vividh sambandhon ka manovaigyanik anusheelan*. Kanpur U.

37. Potdar, Kushal. *Malwi lok gatha: Ek anusheelan*. Vikram U, Ujjain.

38. Pradhan, Uma. *Ramnath Pradhan: Vyakti aur kavya*. APSU, Rewa.

39. Prasad, Shyam Nirmal. *Hindi ke vikas mein Isaaie matavalmbion ka yogdan*. Vikram U, Ujjain.

40. Raghuvanshi, Y.S. *Goswami Tulsidas kee mansettar kritiyon ka sameekshatmak adhyayan*, Bhopal U.

41. Rathore, Moti Lal. *Vidyapati ke kavya sahitya ka sangeet shastriya adhyayan*. Kanpur U.

42. Sahajpal, Sarojbala. *Amritlal Nagar ke sahitya mein nari kee bhoomika: Upanyason ke vishesh sandarbh mein*. Bhopal U.

43. Saxena, Pratibha. *Hindi ke pramukh bhakt charitra: Sahitya mein varnit sanskritik parivesh*. Kanpur U.

44. Saxena, Urmila. *Adhunik hindi mahakavyon ka saundarya shastriya adhyayan*. Mag U, Bodh Gaya.

45. Shanti Kumari. *Bajji ka lok katha sahitya*. Bihar U, Muzaffarpur.

46. Sharma, Indumati. *Nai kavita: Kisim kisim kee kavita, 1950 se 1978 tak*. Vikram U, Ujjain.

47. Shrivastava, Girish Kumar. *Tulsi ke nari vishyak drishtikon ka parvarti hindi kavya sahitya per prabhav*. Kanpur U.

48. Shrivastava, Subhash Chandra. *Hindi Sufi kavya mein prakriti chitran*. Avadh U.

49. Shukla, Batuknath. *Vivadi lekhan ka swarup aur vikas vishleshan*. Avadh U.

50. Shukla, Shri Bhagwan. *Sur kee vakya rachna ka bhasha vaigyanik adhyayan*. Kanpur U.

51. Singh, Mahendra Pratap. *Swatantrayottar hindi kavita mein jansadharan ka sthan*. Kanpur U.

52. Singh, Rajni. *Satthottari hindi kavita mein adhunikta ka bodh*. Avadh U.

53. Singh, Rama. *Hindi ke anchlik upanyason per Premchand ka prabhav*. Avadh U.

54. Sinha, Vijaya Laxmi. *Adhunik hindi mein bal sahitya ka vikas*. RDV, Jabalpur.

55. Surjeet Kaur. *Nai kavita mein vyang swarup aur vishleshan*. Kanpur U.

56. Taneja, Jai Dev. *Hindi rangandolanon ke sandarbh mein Mohan Rakesh ke natkon ka yogdan*. U Delhi.

57. Tewari, Amar Nath. *Nai kavita mein lok tattva*. Kanpur U.

58. Tripathi, Ashok Kumar. *Premchand pravarti* 1970 *tak ke upanyason mein istri purush sambandh*. Kanpur U.

59. Tripathi, P.S. *Hindi sahitya mein vyavharit sanskritik shabdon kee arthdhwani*. Bhopal U.

60. Tripathi, Ramanuj. *Hindi Ram kavya prampra mein Mohan krit Ramashavmegh ka alochnatmak adhyayan*. Kanpur U.

61. Trivedi, Pramila. *Hindi filmon mein sahityik geet evam geetkar*. Kanpur U.

62. Vishesh Laxmi. *Braj kshetra ke manchiya hindi kaviyon ka sahityik yogdan*. Agra U.

Urdu

1. Khatoon, S. Zubaida. *Asghar Gondvi: Life and works*. SVU, Tirupati.

2. Mohammad Fozail Ahmad. *Jamil Mazhari: His personality and literary works*. Mag U, Bodh Gaya.

3. Naeyara, Jameela Begum. *Life and works of Syed Arif Shah Khadri of Nelamangala*. U Mysore.

4. Siddiqui, M.K. *Shaukat Thanvi—hayat va adbi khidmat*. Kanpur U.

5. Tahzib Rashmi. *Trends in Urdu novels after independence*. Bihar U, Muzaffarpur.

6. Zaidi, Mudabber Ali. *Trends and styles in Urdu prose* 1870 *to* 1970. U Raj, Jaipur.

Bengali

1. Banerjee, Narayan. *Rangalal: Jiban O Shahitya*. RBU, Calcutta.

2. Datta, Syamaprasad. *Panchpargania dielect of Chotanagpur: A linguistic study*. D. Litt. U Calcutta.

3. Dutta, Pushpa. *Language in Bengali novel from Bankimchandra to Rabindranath*. NBU, Rajarammohunpur.

4. Ghosh, Chandi Charan. *Comparative study of Rabindranath and Saratchandra in their personality, literary philosophy, political and social thoughts etc*. RBU, Calcutta.

5. Jena, Bhanu Bhusan. *Romanticism and romantic element in bengali poetry*. RBU, Calcutta.

6. Khan. Naresh Chandra. *Ibsen O bangla sahitya*. RBU, Calcutta.

7. Mallick, Sukumar. *Rabindranather palli chinta*. RBU, Calcutta.

8. Mukherjee,Prasanta Kumar. *Bangla upanyase samaj bastabata: Bankim, Rabindra, Sarat*. RBU, Calcutta.

9. Purkait, Nikhiles. *Bangla, assamis-o-oriya upanyaser bhaugolik jarip*. U Calcutta.

10. Siddiqur Rahman. *Prabandha sahitye bengali musalmaner buddhir mukti-andolan, 1905-1947*. U Calcutta.

Assamese

1. Das, Namita. *Comparative analysis of the nominal (Inflectional) morphemes of assamese and bengali*. U Calcutta.

Oriya

1. Acharya, Laxmi Priya. *Fakir Mohan O Sarat Chandranka upanyasare bastababada: Eka tulnatmaka adhyayana*. Sambalpur U.

2. Dhal, Kunja Bihari. *Mansingh kabya kabita: Eka adhyayana*. Sambalpur U.

3. Parida, Ananta Kumar. *Fakir Mohananka sahityare neetibodha*. Utkal U, Bhubaneswar.

4. Pattanaik, Prakash Chandra. *Juanga jati—eka samaja bhittika O bhasatatwika adhyayana*. Utkal U, Bhubaneswar.

Marathi

1. Natu, Prabha K. *Kadambariteel vyaktirekha aak tatveek abhas*. U Poona.

2. Vaidya, Sucheta S. *Samikshak D.K. Bedekar : A study*. U Poona.

Gujarati

1. Modi, Bharati Vinod. *Some issues in the phonology of gujarati*. MSU, Baroda.

Telugu

1. Viswanadha Reddy, K. *An anthropological study of the telugu folk songs of Chittoor District, Andhra Pradesh*. SVU, Tirupati.

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REGISTRAR

OSMANIA UNIVERSITY

HYDERABAD-500 007 (A.P.)

Dated : 23-2-1984.

Advertisement No. 2/84

Applications in the prescribed form together with the Registration fee of Rs. 5/- payable through M.O./I.P.O./Challan 'A' are invited for the post of Lecturer in Genetics in the University Service, so as to reach the undersigned on or before **21-3-1984**.

Qualifications

1. A Doctor's Degree in Genetics/Botany or Research work of an equally high standard with a specialisation in Cytogenetics/Plant Genetics/Biochemical Genetics.
2. Consistantly good academic record with first or high Second Class (B in the seven point scale) Master's Degree in the relevant subject or an equivalent degree of foreign University.

Specialisation : Plant Genetics.

Desirable : Research experience in Tissue culture studies as evidenced by publications in standard journals.

Scale of Pay : Rs. 700-1600.

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Note: Age limit does not apply to the employees of this University.

(ii) Relaxation in age to the extent of five years may be granted to candidates belonging to the SC, ST & BC.

(iii) The teachers of affiliated colleges who have put in atleast five years service in any of the college affiliated to the Osmania University be given relaxation in age to the extent of five years.

(iv) Age relaxation can be considered in deserving cases.

(v) 14%, 4% and 25% reservations are made for SC/ST and BC, classes respectively.

REGISTRAR

NORTH EASTERN HILL UNIVERSITY

LOWER LACHAUMIERE : SHILLONG

No. Advt./P-1/84-744

Shillong, the 14th February, 1984.

Applications are invited for some vacant posts in existence and which are likely to occur during the current year as shown under :—

Sl. No.	Name of Posts	No. of Post Vacant	Scale of Pay
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1.	Section Officer		Rs. 650-30-740-35-810-EB-35-880-40-1000-EB-40-1200.
2.	Technician (Reprography)		Rs. 550-25-750-EB-30-900.
3.	Programme Organiser		-do-
4.	Programme Assistant		Rs. 425-15-500EB-15-560-20-700.
5.	Mathematical Typist-cum-Technician.		Rs. 550-25-750-EB-30-900.
6.	Hindi Stenographer		Rs. 330-10-380-EB-12-500-EB-15-560.
7.	Junior Stenographer		-do-
8.	Upper Division Assistant		-do-
9.	Sanitary Inspector		-do-
10.	Lower Division Assistant		Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.
11.	Junior Library Assistant		-do-
12.	Store-keeper		-do-
13.	Electrician		Rs. 260-6-326-EB-8-350.
14.	Laboratory Attendant		Rs. 210-4-250-EB-5-270.
15.	Cook		Rs. 200-3-206-4-234-EB-4-250.
16.	Peon		Rs. 196-3-220-EB-3-232.
17.	Cleaner		-do-
18.	Chowkidar		-do-
II. For Nagaland Campus			
19.	Section Officer (Finance)		Rs. 650-30-740-35-810-EB-35-880-40-1000-EB-40-1200.
20.	Section Officer (Exams)		-do-
21.	Senior Stenographer		Rs. 425-15-500-EB-15-560-20-700-EB-25-800.
22.	Professional Assistant		Rs. 550-25-750-EB-30-900
23.	Upper Division Assistant		Rs. 330-10-380-EB-12-500-EB-15-560.
24.	Junior Stenographer		Rs. 330-10-380-EB-12-500-EB-15-560.
25.	Lower Division Asstt.		Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.
26.	Junior Library Asstt.		-do-
27.	Peon		Rs. 196-3-220-EB-3-232.
28.	Chowkidar		-do-
29.	Attendant		-do-
III. For Mizoram Campus			
30.	Section Officer (Finance)		Rs. 650-30-740-35-810-EB-35-880-40-1000-EB-40-1200.
31.	Section Officer (Exam.)		-do-
32.	Senior Stenographer		Rs. 425-15-500-EB-15-560-20-700-EB-25-800.
33.	Professional Assistant		Rs. 550-25-700-EB-30-900.
34.	Upper Division Asstt.		Rs. 330-10-380-EB-12-500-EB-15-560.
35.	Junior Stenographer		-do-
36.	Lower Division Asstt.		Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.
37.	Cook		Rs. 200-3-206-4-234-EB-4-250.
38.	Attendant		Rs. 196-3-220-EB-3-232.
39.	Chowkidar		-do-
40.	Cleaner		-do-
41.	Peon		-do-
42.	Bus Conductor		-do-
IV. Pachhunga University College			
43.	Senior Library Assistant		Rs. 380-12-500-EB-15-560.

1	2	3	4
44.	Driver (Bus)		Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.
45.	Bus Conductor		Rs. 196-3-220-EB-3-232.
46.	Lower Division Asstt.		Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.
47.	Laboratory Attendant		Rs. 210-4-250-EB-5-270.
V.	**College of Agriculture**		
48.	Section Officer (Exams)		Rs. 650-30-740-35-810-EB-35-880-40-1000-EB-40-1200.
49.	Laboratory Technician for Agri-Botany.		Rs. 550-25-750-EB-30-900.
50.	Lab. Technician for Agri-Chemistry		-do-
51.	Lab. Technician for Veterinary		-do-
52.	Stenographer		Rs. 425-15-500-EB-15-560-20-700-EB-25-800.
53.	Artist		Rs. 425-15-500-EB-15-560-20-700.
54.	Staff Nurse		Rs. 425-15-560-EB-20-640.
55.	Senior Library Assistant		Rs. 380-12-500-EB-15-560.
56.	Accountant		Rs. 300-10-380-EB-12-500-EB-15-560.
57.	Lower Division Asstt.		Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.
58.	Electrician		Rs. 260-6-326-EB-8-350.
59.	Welder		Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.
60.	Cook		Rs. 200-3-206-4-234-EB-4-250.
61.	Chowkidar		Rs. 196-3-220-EB-3-232.
62.	Junior Library Attdn.		-do-
63.	Kitchen Attendant		-do-

Essential Qualifications

Sl. No. 1, 20, 31 and 48 : (a) A University Degree.

(b) At least 10 years experience in Secretarial/Administrative work preferably in a junior Administration or Supervisory post in a University, Government or Semi-Government Organisation.

Preference will be given to candidates who have experience in Examination work.

Or/And

(c) Experience in University Financial administration and general accounting including elementary work accounts.

Or/And

(d) Experience in Stores purchase and store accounting.

Sl. No. 2. : 1. B.Sc. 1st or 2nd Class preferably with Electronics/Physics as one of the subjects.

2. Diploma in Reprography from a recognised Institution.

3. 3 years experience in Operating Electro-Static copiers, microfilm cameras, processing of microfilms and half tone negative films.

N.B.: Relaxation in academic qualifications can be considered in case of candidates being otherwise qualified and having long experience in the line.

Sl. No. 3 : M.A. (2nd Class) in one of the Social Science/Education/Home Science/Extension with some experience.

Sl. No. 4 : (a) At least second Class Bachelor's Degree in one of the Social Sciences/Education/Home Science or Extension.

(b) **Desirable :** One or two years experience in research/extension or field work.

Sl. No. 5. : B.Sc. with good typing speed and having a strong feeling for mathematical terms and symbols. Should know handling of equipments like Scanner, projects etc.

Sl. No. 6 : At least Matriculation but Graduates with previous experience of drafting and noting will be preferred. Minimum 100 w.p.m. in Shorthand and 30 w.p.m. in Hindi Typing.

Sl. No. 7, 24 and 35 : (a) P.U.C. or equivalent examination.

(b) Must possess the speed of 80/40 w.p.m. in Shorthand and Typing respectively.

Sl. No. 8, 23 and 34 : A University Degree. Some experience in office work.

Sl. No. 9. : (a) Matriculation or equivalent examination recognised by University or Board.

(b) Sanitary Course from recognised Institution, with experience of 3 years in some Government Department/Public Undertaking/Commercial Organisation etc.

Sl. No. 10, 25, 36, 46 and 57 : Matriculate with typing speed of at least 35 w.p.m.

Sl. No. 11 and 26 (a) An Intermediate/P.U.C. from any recognised University.

(b) **Desirable :** Certificate in Library Science and good speed in typing.

Sl. No. 12 : Matriculation preferable with knowledge of handling stores, maintenance of stock Register etc., and typing speed of 30 w.p.m.

Sl. No. 13 and 58 : Should be a Diploma holder in Electrical Engineering (Qualifications relaxable in suitable cases).

Sl. No. 14 and 47 : Matriculation preferably with Science and with some experience of Laboratory work.

Sl. No. 15, 17, 29, 37, 38, 40, 60, 63 :

(a) Must have passed class VI.

(b) Practical experience in the line.

Sl. No. 16, 27, and 41. : Must have passed Class VIII.

Sl. No. 18, 28, 39 and 61 : (a) Must have passed Class VI.

(b) Ex-servicemen or trained in homeguard.

Sl. No. 19 and 30: Graduates in Arts/Science/Commerce with at least 10 years experience in Accounts or Audit and having adequate knowledge of rules and capacity to supervise the staff under his control. Preference will be given to S.A.S. candidates and candidates having knowledge of regional languages.

Sl. No. 21, 32 and 52 (a) Graduates and proficient in English and should be able to manage office and do secretarial duties independently.

(b) Must possess the speed of 120/40 w.p.m. in Shorthand and typing respectively.

Sl. No. 22 and 33. (a) M.A./M.Sc./M. Com. with B. Library Science.

OR

B.A./B.Sc./B. Com. with B. Lib. Science and four years experience of working in the Library (This is applicable only to Departmental candidates).

(b) Experience of handling acquisition, classification cataloguing and periodical works in a University/College/Special Library.

Sl. No. 43 and 55 : (a) B.A./B.Sc./B. Com with certificate in Library Sciences.

(b) Experience of working in a College/University Library.

(c) Knowledge of Typing.

Sl. No. 44. : Ability to read and write English/Hindi and make simple Arithmetical calculation. Should have 3 years experience and Driving License for Light/Medium/Heavy vehicles.

Sl. No. 42 and 45 : Must have passed Class VIII.

Sl. No. 49 : M.Sc. (Botany)/M.Sc. (Agriculture Botany).

Sl. No. 50 : M.Sc. (Chemistry)/M.Sc. (Agriculture Chemistry).

Sl. No. 51. : B.V.Sc./M.Sc. (A.H.)

Sl. No. 53. : At least graduate in Fine Arts (Painting) with experience in drawing and painting.

Desirable : (i) Experience in Photography.

(ii) Experience in the preparation and display of museum exhibits.

Sl. No. 54. : A candidate must be a qualified Staff Nurse with three years of experience and must possess :

(a) Senior Certificate in Nursing.

(b) Senior Certificate in Mid-Wifery.

(c) Must have passed Matriculation.

Sl. No. 56 : (a) Graduate preferably in Commerce and must have five years experience in Accounts work either in Public Undertaking or Educational Institution/Governments.

(b) Preferably with a certificate in Accounts Training.

Sl. No. 59 : Read upto Class VIII with I.T.I. or equivalent Certificate in Welding with 2 years experience.

Sl. No. 62 : (a) Matriculate.

(b) **Desirable :** Some experience in Library work.

Age

Candidates must not be less than 18 years and not more than 27 years on **1-1-1984**. 5 (five) years relaxation will be admissible to candidates belonging to Scheduled Castes/Scheduled Tribes.

For posts in Medziphema, Kohima and Aizawl, qualifications, experience and age are relaxable where no eligible candidates are otherwise available.

Application on plain paper indicating name, present address, age, qualifications, in detail, experience and other relevant particulars should reach the Registrar, North-Eastern Hill University, Lower Lachaumiere, Shillong-793001 on or before **31-3-1984** along with an Indian Postal Order for Rs. 5/- (Rupees 2.50 p. in case of Scheduled Castes/Scheduled Tribes candidates) payable to the 'North Eastern Hill University', Shillong as application Fee. Applications are exempted from payment of application fee, for posts indicated at Sl. Nos. 14, 15, 16, 17, 18, 27, 28, 29, 37, 38, 39, 40, 41, 42, 45, 47, 60, 61, 62 and 63.

NOTE

1. Canvassing directly or indirectly will be a disqualification.
2. Persons in service should submit their applications through their employers.
3. These posts are open to all citizens of India who satisfy the required qualifications. 45% of the posts are reserved for SC/ST candidates, 5% for ex-servicemen and 3% for physical handicapped.
4. Besides the basic pay, allowances admissible to the official or corresponding categories of the Government of India posted at Shillong/Nagaland/Mizoram shall also be paid by the University.
5. Candidates appointed should be prepared to serve anywhere within the jurisdiction of the North-Eastern Hill University.
6. Candidates called for interview will have to appear before the Selection Committee at the office of the North-Eastern Hill University, Shillong or at any place specified. No. TA/DA will be admissible for the interview.

Mrs. M.R. Mawlong
REGISTRAR

Hall Management
INDIAN INSTITUTE OF TECHNOLOGY : KANPUR

Applications are invited for the post of Mess Manager and Assistant Mess Manager to manage the mess for about 400 students in the scale Rs. 425-15-500 EB-560-20-700-EB-25-800 and in the scale of Rs. 330-10-380-EB-12-500-EB-15-560 (Total emoluments approx. 1,150/- and Rs.950/- respectively).

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Age of retirement : 60 Years.

Qualifications & Experience
(for Mess Manager)

High School/Higher Secondary + Diploma in Hotel Management/Catering with 5 years experience.

Candidates with High School/Higher Secondary + excellent relevant service career may also be considered.

Qualification & Experience
(For Asstt. Mess Manager)

Diploma in Hotel Management or Craft Course in Cookery/Restaurant with 3 years experience.

Candidates with High School/Higher Secondary + excellent relevant service career may also be considered.

The applications on plain paper giving name, address, age, qualifications and experience etc. (supported with testimonials) should be sent to Chairman, Council of Wardens, I.I.T. Kanpur-208016, so as to reach by **26th March, 1984**.

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Dr. J.S. Sengar
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(b) A research degree of a doctorate standard or published work of a high standard; and

(c) At least ten years experience of teaching post-graduate classes and some experience of guiding research.

2. **Reader in General Education, General Education Centre.**

3. **Reader in Philosophy, Department of Philosophy.**

Scale of Pay : Rs. 1200-50-1300-60-1900 plus allowances.

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I-Essential

(a) A firist or a high second class Master's degree in the subject concerned of an Indian University or an equivalent foreign qualification;

(b) A research degree of a Doctorate standard or published work of a high standard; and

(c) At least five years experience of teaching post-graduate classes and some experience of guiding research.

II-Desirable

For Post No. 2, Reader in General Education, General Education Centre. At least five years of teaching General Education Courses.

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Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a consistently good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research Laboratory/Organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within five years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

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For Post No. 6, Lecturer in Bengali. Knowledge of Hindi and experience of teaching and/or research.

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Zamir Ahmed Khan
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A.N. Sharma
Asstt. REGISTRAR

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Dr. S. Z. Qasim, Secretary, Department of Ocean Development, Government of India, delivering the convocation address at the Annamalai University, Annamalainagar. Seated on his right are Shri S. L. Khurana, Governor of Tamil Nadu and Chancellor of the University and Prof. S. V. Chittibabu, Vice-Chancellor.

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UNIVERSITY NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :

M.S. RAMAMURTHY

Book Binding Techniques

Given below are the recommendations of the International Seminar-cum-Workshop on Development of Book Binding Techniques organised by the National Book Trust, India, an autonomous organisation under the Ministry of Education & Culture, with the assistance of UNESCO, at New Delhi, on the occasion of the Sixth New Delhi World Book Fair held from 4-14 February, 1984.

- Book promotion organisations in each member country should request the National Standard Organisation in the respective country to formulate standards for materials and inputs used in book binding. It was noticed that there was hardly any quality control in these areas.
- The printing and other like institutes in each country may be requested to impart specialised training for both hand and mechanised binding. Polytechnics/institutions, in particular, may be requested to include book binding as a part of their curriculum. The seminar also recommended that an exclusive institute be set up in each country for training craftsmen and personnel required for binding departments.
- Serious efforts be initiated, on a priority basis, in each country for the revival of craftsmanship in book binding in view of the gradual disappearance of such craftsmanship, which the seminar noted, was a global phenomenon and has caused serious concern. At the same time, efforts to sustain hand binding should also be made, as hand-binding has an important role to play in many countries, specially for small editions.
- Publishers, printers and binders may be urged to use material of standard quality for book binding.
- The Governments of the respective countries, may be requested to consider to abolish the duty on the import of machinery for book binding so that such machinery is available easily and at competitive prices.
- The member states may be requested to mobilise national level efforts to make available and develop raw material and machinery of high quality required for book binding. It was noticed that in many countries such material was available but was not being used exclusively for book binding.
- Each country may be requested to set up Development Panels at national levels to look into the problems of the binding industry.
- Urgent efforts may be made to write and produce good manuals and guides for book binding.
- Awards and incentives may be instituted for best bound books and craftsmen so that such work receives due recognition and encouragement.
- Facilities for scientific testing of materials used for binding may be made available.
- Efforts to compile comprehensive sources of supply of binding materials may be made.
- Such International Seminars be organised frequently in different countries so that the latest developments in technologies are shared and arrangements are made for the exchange of experts.

Avadh University Seminar on "New Education"

Avadh University, Faizabad organised a seminar on "New Education" on February 11 and 12, 1984 at Butler Palace, Lucknow. The Vice-Chancellor of the University, Dr. A.P. Mehrotra, has sent a report on the seminar. The seminar was addressed by Hon'ble Shri C.P.N. Singh, Governor of Uttar Pradesh. Many educationists and others participated.

There is considerable concern expressed at the absence of a value orientation in our educational programmes. A large majority also feels that, despite some islands of excellence in our educational system, there is plenty that needs close examination and urgent reform. Also is a growing belief, articulated more forcefully in recent times, that for the survival and progress of humanity there is an imperative need to harmonise science and technology with the arts and culture.

What has "New Education" as a concept to offer against the background of what has been briefly stated above? Perhaps readers may discover a glimpse, perhaps a ray of hope and an answer in the report of the seminar which we have great pleasure in giving below.

We would also welcome further ideas on the subject.

— Editor

The inaugural session of the seminar started with the Kulgeet of Avadh University. Dr. A.P. Mehrotra. Vice-Chancellor of Avadh University welcomed the Governor Shri C.P.N. Singh, the Education Minister of U.P., Dr. Ammar Rizvi Dr. Kireet Joshi, Special Secretary of Higher Education, Chairmen of different Commissions, distinguished VC's and learned delegates from different parts of the country. Highlighting the background of New Education, Dr. Mehrotra requested the Governor to inaugurate the seminar.

The Governor expressed his satisfaction over the enthusiasm and response of the participants. Since he has been the initiator of the idea he tried to thrash out the salient features of New Education—education for the re-affirmation of the Man, his excellence and perfection. He termed Education as a man-making process by steady practice of concentration and will power.

He highlighted three essential ideas that lie at the basis of New Education. Firstly it was a deliberate process, a profound science and art of psychological perfection. Secondly, education is an organisation—organising the impulsive life processes. Thirdly education is an integration. It harmonized different threads of tendencies, propensities, aspects and poises of everprogressive manhood. It leads to liberation—सा विद्या या विमुक्तये

Shri Singh remarked that the theme of New Education and its background have become more important today. He asked the teachers and educationists to re-examine the promises and processes of current education. We have to

AVADH UNIVERSITY

Photograph taken on the occasion of a seminar on "New Education" organised by the Avadh University at Butler Palace, Lucknow.

learn the true art of learning. He visualised that the question is relevant not only in Arts, Science and Commerce but in the fields of professional courses too viz. Agri., Engg., Medicine etc.

We have to develop new attitudes and a flexible system of education as already propounded by Bertrand Russell and Shri Aurobindo.

In the end he remarked that the task is difficult but not impracticable as it has been appreciated and approved by the Prime Minister of India.

Dr. Ammar Rizvi expressed his privilege for getting an opportunity to realse the book—'Mahamahim Sri C.P.N. Singh Speaks on New Education'.

Shri R.C. Tripathi the Education Secretary to U.P. Govt. passed a motion of thanks for the Governor, Hon'ble Education Minister and all the organisers and participants and guests.

The keynote address was presented by Dr. Kireet Joshi.

In the business session Dr. Kireet Joshi, presenting his paper 'Learning to be' gave a brilliant exposition of the central theme of New Education and visualised that this ideology, though initiated at present by UNESCO is basically Indian. The system of New Education has been designed to eradicate the evils of present educational system and to meet the challenges of future. He tried to elaborate the different levels of consciousness and their interrelations, visualising that the child is to be liberated.

The New Education in his view is value-oriented. He tried to elaborate different aspects of value teaching. Quoting profusely from the works of Plato he emphasized that present man is to be transformed since he is transitionl being. Throwing light on several trinities of virtue he laid emphasis on the cultivation of virtues for attainment of perfection.

Children, being keen observers, are to be guided through right type of 'examples and influence'. He laid emphasis on introspection, purification and realization of supreme ideals. Discussing the central concept of morality to 'Swabhava' and 'Swadharma' he suggested that it is a preparation for spirituality—the discovery and perfection of the inner self.

Appropriate methods are to be explored and developed for teaching of values at different levels which are to be learned in their psychological aspects. For this, a flexible structure and free progress are essential. Analysing the triple system of education-lecture, syllabus and examination he envisaged an evolutionary curriculum in which child is to be consulted at every stage.

Dr. Joshi in his paper discussed elaborately the objectives and methods of testing. The tests are to be spontaneous and should be a means of self evaluation, stimulation, correction and perfection.

Dr. Joshi proposed four main features regarding the organization of New Education and the general role of the teachers:

(a) A sincere pursuit of the Truth; (b) informality in instruction; (c) an ever fresh youthfulness; (d) a search for the higher aims of life.

He differentiated between culture and training and visualised that both are to be harmonised in the system. In the end Dr. Joshi made three main recommendations :

(a) Learning by practising; (b) search for meaning & unity of knowledge; (c) perpetual education and perpetual youth.

In conclusion he reiterated that learning to be and value oriented education are not only relevant to the need of our times but they are imperative if we wish to prepare India for the imminent future.

Dr. Joshi explained the salient features of the exhibition—"A philosophy of education for the contemporary youth—learning to be." He traced some trends in the youths of India. The youths suffer from fear of unemployment, are revolting and attracted towards various types of indulgence. But there are two very helpful tendencies, love for science and internationalism which can be taken as a lever to lift the youth. Analysing the contents of the exhibition he said that it is divided into four chapters. The first chapter is related to the changing horizon of the contemporary youth, the second to the contemporary youth groping for learning to be, the third to science and art of learning to be and the fourth to the vision of the future.

Dr. T.K. Sarkar presenting an outline of the Exhibition on Human Evolution said that it tried to depict the concept of evolution. Evolution of the Cosmos, evolution of life and Art, relation of evolution to Education, evolution of Science and Technology and present dangers of exploitation and possibilities and probabilities of the survival of man.

Participants visited the exhibition. There was also an open discussion.

Dr. A.P. Mehrotra concluded the session and the Seminar by saying that we should seriously take up the concept of New Education because everybody agreed that the present educational system was completely outdated and rotten and must be cleaned. Hence value oriented education was of prime need.

For its implementation we will have to develop an infrastructure which has to be evolved by the teachers who will have to work with missionary zeal. Simultaneously Teacher Training Programmes will also have to be oriented further on micro and macro levels and will have to be reorganised. The Avadh University, G.B. Pant University of Agriculture and Technology and Lucknow University will start New Education System from July, 1984. ☐

Whither Social Work Education

J. Visuvathas Jeyasingh*

Introduction

In common parlance "lend a helping hand" is often termed as Social Work. In fact, Social workes is a helping and enabling profession. Since times immemorial, it operated in the form of charity whereby the poor were given food or clothes or shelter as social service. The basic content and meaning of social work has remained unchanged over many centuries; what has, now changed is the technique, the service and the expertise. It may now be termed as 'scientific social service' in which performance, methods, design and attitude for positive social change and social action plays a vital part. Therefore, social work now, is considered as a motivational process by which it tackles the problems of human beings in a scientific way and makes them self-made, self-reliant and self-content individuals, groups and communities. Its main objectives are to restore impaired social functioning of individuals, groups and communities; to control and prevent such conditions that threaten effective and satisfying social functioning; and to conduct scientific investigation into the causes, treatment and prevention of social ills and to suggest suitable modifications in the existing social welfare, policies and programmes. Thus as Mr. H. M. Kumarappa puts it "Modern Social Work adopts the constructive approach to social problems and seeks to provide permanent results of rehabilitation by eliminating the causes of social ill being".

Social Work : A Profession

Like law, medicine and engineering, social work is acknowledged as a profession, alleviating the sufferings of mankind. It is a young profession in India. Professional social work confined itself to human relations and comprehensive knowledge of dynamics of human growth and behaviour may be expected to bring about the desired changes. In a way, the professional social worker is more concerned with alleviation of problems that are brought by psycho-social maladjustments and far less with the larger socio-economic issues of poverty, unemployment, under-employment, growth of services, social policy etc. To identify a delinquent, social workers find out the causes like broken home, socio-pathic father, parental negligence, association with delinquent gang etc., and suggest for proper corrective measures. Similar to other professions, social work also adopts the three major tools such as study, diagnosis and treatment. In advanced countries, this is privately practised; in India, in metropolitan cities such as Delhi, Bombay, Calcutta, Lucknow, Pune, Madras and Bangalore a few practising centres are functioning. P.N. Luthera, observes "Social Work is more than a profession or a medium for earning and subsistence", since it belongs to those distinguished groups or individuals who have mission, an idealism, a missionary zeal and enthusiasm for helping human beings to achieve a high quality of life. Thus Prof. T.K. Muthuvenkatraman also writes "Social Work not only calls for science and a system but also a proper combination and a blending of the questioning mind and the feeling of heart".

Development of Social Work

The need for professional education in social work was emphasized for the first time by Anna L. Dawes at the International Congress of Charities, Correction and Philanthropy held in Chicago. In 1898, the New York Charity Organisation Society offered the first training programme of six-week duration. Later it was extended to six months, and developed into the New York School of Social Work and since 1940 affiliated with Columbia University. In India, the first educational programme in Social Work was established at Sir Dorabji Tata School of Social Work (later re-named as the Tata Institute of Social Sciences) by the Dorabji Tata Trust in 1936, through the work of Clifford Manshrndt. It became a deemed university in the early sixties. In South India, the first institution was Madras School of Social Work. Social work education in India is forty seven years old. There are fortyfive institutions offering social work education in India. Eleven of these provide Ph.D. programme one of which also has a D.Litt. One offers M. Phil and Ph.D. Programmes in Psychiatric Social Work (National Institute of Mental Health and Neuro Sciences, Bangalore). Four offer M. Phil. degree in Social Work and diplomas in social work after the bachelor's degree; and five offer Bachelor level programmes only. While Maharashtra (13) and Tamil Nadu (10) had cluster of institutions, states in the extreme north and north east such as Punjab, Jammu and Kashmir, Himachal Pradesh, Haryana, Manipur, Assam, Meghalaya, Mizoram, Nagaland, Tripura, Orissa and Bihar has no institutions. In Tamil Nadu, Madras School of Social Work at Sacred Heart College (Tirupathur), Stella Maris College (Madras), Loyola (Madras) under Madras University territory, Departments of Social Work at P.S.G. College of Arts and Science (Coimbatore) and Ramakrishna Vidyalaya Arts College (Periyanakan Palayam) in Bharathiar University territory, Department of Social Work at Bishop Heber College (Tiruchirapalli) at Bharathidasan University territory and Madurai Institute of Social Work in Madurai-Kamaraj University territory are

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Professor & Head, Deptt. of Social Work, Institute for Social Sciences and Research, Vellore.

offering M.A. Degree in Social Work. In addition, the Heber Institute of Social Work at Tiruchirapalli offers two year programmes in Social Work (DSSA) for sponsored candidates from the dioceses of churches of South India; the department of Social Work at Institute of Social Sciences and Research (Vellore), offer two year Master programmes in Social Work (M.S.W.); these two are Christian autonomous institutions and at present are not affiliated to any university.

Social Work Curriculum

In the earlier stages, many institutions offered certificates and diploma courses in Social Work. The Bachelor's degree level courses offered at few institutions are designed to train the students for grass-root level developmental programmes. At present a vast majority of the institutions offer two year full-time Master level programmes (M.A/M.S.W. degree or D.S.S.A/M.S.W. diploma). The design of the Social Work syllabus is well planned to train the students in social work methods by providing them with an integrated scheme of class room instructions, field work experiences in social welfare agencies, social work camp, study tours, and social work research activities. It equips young men and women with the necessary knowledge, skill and techniques to deal with human problems to instill in them social and moral values to bring into focus their leadership qualities to acquaint them with the process of scientific enquiries into social problems etc.

In post-graduate level of first year, basic subjects such as society, human growth and development, development of social work, and the methods, such as, social case work, social group work, community organization, social action and social work research (including elementary statistics) are taught. In the second year, fields of social work, such as labour welfare, industrial relations and personnel management, correctional social work, school social work, social welfare administration, medical and psychiatric social work, community development, family and child welfare and family planning are taught. In addition, a few schools are teaching the papers on "development of weaker sections", "Financial Management" and "Developmental Communication". Internal assessment has been in practice in schools of social work from times immemorial; it is made by considering factors like regularity, sincerity, participation, matter content, ability to tap the local resources, ability to differentiate between objective and subjective, transference and counter transference, maintaining confidentiality, ability to chalk out plans on his own accord, evaluation etc; the evaluation is hundred percent by the concerned teacher. Now in many universities, in theory also, internal assessment system is working successfully. Experience has shown that the internal assessment system is working successfully; it makes the students to work hard and thereby it makes them to know the subject in depth. A vast majority of the post-graduate institutions offer specialisation in the fields of social work. Six institutions offer generic courses in social work. In general male students take up social work course with the aim of becoming Labour Welfare Officer/Personnel Officer. In India, at the present juncture, employment opportunities are more for those who take generic courses.

Concurrent field work programme is an integral part of social work curriculum. The field work programme provides varied experiences such as (1) to get an opportunity to test one's knowledge and acquire skills to apply it in a practical situation (2) to obtain the necessary service orientation and insight into the various agencies and their welfare services and (3) to seek new knowledge requisite for social work practice and render service to people. These will deepen one's understanding of himself in relation to others and eventually to evaluate his behaviour and achievement. Therefore, Prof. T.S. Natarajan rightly puts it "concurrent field training is....organised along-side the academic programme and in a real community situation to provide opportunities to students for (i) development of skills (ii) application of theory to practice (iii) development of proper attitudes and (iv) development of self reliance". In practice, to acquire such rich experiences, the students are placed in social welfare agencies such as children homes, blind rehabilitation institutions, deaf and dumb schools, homes for mentally retarded children, schools, industries, trade union offices, offices of the Government, Labour Welfare Officers, clinics, Nutrition centres, central jails, borstal schools, production departments, discharged prisoners' aid societies, slums, villages etc. These experiences enable them "to learn by doing" and develop the needed social work skills and techniques to tackle human problems. Recording of field work, experiences, weekly individual supervisory conferences, group conferences and seminars form part of the field work instructions. Skills in interviewing others, ability to record factual and relevant material, skills in rendering therapeutic service etc. are developed during the field programme.

Functions of Social Work

Social work has identified three major functions such as remedial, preventive and developmental. Although a number of its programmes and services are still geared along preventive and remedial lines the developmental function is germane to the developmental countries. The aim is to promote and create those conditions which will enable people to become fulfilled human beings, in an atmosphere of social equity. To achieve this objective social workers help people to participate in essential social work practices in India. This is achieved by a combination of class room and field work learning experiences on a concurrent basis. The guideline for the course is that of providing framework for study within which there is individual opportunity for individualization of the students learning potential and needs. Their individual abilities and interests are stimulated by means of auxiliary readings, field work enriching experiences, tours, trips, audio-visual, extra-curricular and community responsibilities so that students are prepared for the multiplicity of experiences expected of them as practising social workers participating actively and fruitfully in such developmental programmes as community development, man power development, land reform etc. The new stress on the developmental function does not mean rejection of remedial and preventive ones. It merely serves notice that social work has enlarged the number of recipient of welfare services to include a large portion of the population, in order that they too may contribute to and enjoy the benefits from economic development. In fact the remedial and preventive approaches are integrated into developmental when in addition to meeting the needs of the traditional targets, population programmes and services are focussed simultaneously on the development of their social functioning in order to maximising their contribution to national development.

ASSWI

As regards to the development of social work education, the role of Association of Schools of Social Work in India (ASSWI) is commendable. It organises seminars for social work education and tries to review the social work curriculum. It has published nine books. It also releases a quarterly newsletter called 'Social Work Educator'.

Five Year Plans

The Sixth Five Year Plan indicates that the plan outlay for social work education and training for the periods (1974-79) and (1980-85) are 2.ul and 7.00 crores of rupees respectively; but the plan is not providing the information on the mode of expenditure. It is suggested that these grants should be channelled to schools of Social Work.

UGC Review Committee

In 1960 the University Grants Commission appointed the first Review Committee for Social Work Education and its report was published in 1965; the committee made important suggestions such as (1) need for training at matriculation and under-graduate levels to establish such full-fledged learning on the place of the existing ad-hoc programmes (2) The need for generic course in the first year and particular field in second year was suggested to balance the realities of job opportunities which required broad based social work training, with the development of field related training and (3) As regard to the faculty and student it should be 1:10 not including the Director/Principal/Head. (4) Need for research by the faculty and (5) Channelling of grants directly from UGC. In July 1975, another committee was appointed. The report of their group published in 1980, which suggested that the Social Work must design a curriculum relevant to the type of manpower required in the areas of social realities of the country such as poverty, over population, illiteracy, malnutrition, low productivity, unemployment, underemployment and disabilities resulting from social and economic inequity and the exploitation of the vulnerable and weaker sections of our society. Further it made the observation such as location of new institutions in ill-served areas; lopsided development of professional social work education at higher levels as against lower level for frontline workers; the need to reorient syllabi to review field work practice and to improve its content and methodology.

Conclusion

Professor M.S. Gore lists in his book titled "Some Aspects of Social Development" the functions of social workers to "identify the dysfunctional consequences of industrialisation, urbanisation and the rapid development of agriculture to institute services which will smoothen the change by providing rehabilitative, re-training and community support facilities, develop new services which will increase the utilisation of available social services in the areas of health, housing, education and population policy". The more specific tasks that the social worker portrays in connection with the developmental functions are: influencing national priorities, utilizing the political process; interpreting social developmental goals; and helping those in need to execute these tasks. Social workers therefore, perform varying roles i.e. interpreter, spokesman, enabler, researcher, planner and organiser. Thus it is evident that social worker can contribute to a large extent to the development of the nation. Such a good and noble profession still seeks the recognition of people. □

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Dr. Qasim Addresses Convocation of Annamalai University

Excerpts from the convocation address delivered by Dr. S.Z. Qasim, Secretary, Department of Ocean Development at the Annamalai University, Annamalainagar.

"...My first duty, on this occasion which is a memorable one, is to offer my warm greetings and felicitations to all those who are receiving their degrees and diplomas today, on successful completion of a very important and glorious phase of their lives. Many of you have now to face a transition from the process of learning and preparation for the examinations, to a phase which requires action. First of all, I wish all of you good luck and success in life. My only advice is, whatever you do and wherever you go, never give up the process of learning. What I mean by the process of learning is, that, you should keep your eyes and ears always open. You must also remember that modesty and humility are the signs of greatness, not arrogance and obstinacy. You must also remember that you are the citizens of India, first and foremost, and then scientists, teachers, administrators, researchers or whatever you become later on. Therefore, all your actions must reflect on what you can give to your country. There is one more point which I think might prove to be useful to all of you, and that is, your good public relations in future life. Never let your good relations with others deteriorate and never let your rapport with the general public become cold. As far as my experience in South India goes, I can say without hesitation, that the people of South India in general, and of Tamilnadu in particular, are polite, decent, unassuming, modest and God-fearing, and to these virtues they owe their success, in most competitive examinations or in any field of activity. With these few words, I give you, the recipients of various degrees, medals and other distinctions, my warm greetings and good wishes for a bright future.

"On an occasion like this, it is customary to take stock of the aims and objectives of higher education in the Universities, in the light of the future needs of our country. I wish, therefore, to utilize this opportunity to share my ideas with you, regarding the future trends in man-power-planning and marine-scientific-research in India. As one associated with the development of marine science in this country for more than 30 years, I consider it my professional obligation to allude to this field.

"Let me first of all explain what we mean by ocean development which is also the name of my Department. Since ancient times, the sea has been used for two main purposes fishing and shipping. However, the recent discovery of oil, gas and other minerals from the sea-bed, has convinced every one that some of the biggest treasures in the world lie hidden in the sea. In fact, whatever is found on land is also found somewhere in the sea, because it is the same land which extends under the sea; the only difference is that it has overlying water. We cannot see the land under the sea with our naked eyes, and yet we have to find the resources; the science of oceanography has thus become most exciting.

"Ocean development means knowledge of the sea resources, such as food, chemicals, minerals and energy, and their utilization for the benefit of our people. This would mean exploration of the sea and the development of technologies for the exploitation of its resources. Exploration would involve new inputs like the availability of research vessels, institutional framework, infrastructure and shore-based facilities, while the development of technologies for the exploitation would require engineering inputs and new innovations, to tap the resources at a cost, which is competitive with the land-based resources. Both these components require trained manpower. In fact, manpower is the most crucial element in the development process.

"Today there are about 900 marine scientists in our country. With the arrival of the research vessel *Sagar Kanya* the demand on the existing manpower has increased considerably. Moreover, another vessel (FORV), being built in Denmark, is likely to join the existing fleet, by September 1984.

Exploration of the Exclusive Economic Zone (EEZ) and the deep sea areas, including the rich Antarctic seas, are of much interest to India, to meet the growing demands for food and minerals, during the next two decades. Remote sensing of ocean parameters is another very promising area for development. Apart from the above activities, equal emphasis has to be laid for the development of the centres of excellence in basic oceanographic research. It is therefore imperative to strengthen the much-needed research facilities in all the areas of ocean science and technology. Research and development activities in the field of ocean sciences would require at least 1000 additional competent scientists and engineers in the next 5-7 years. This additional scientific manpower will have to be supported by adequate infrastructure and shore-based facilities. This would mean that we must have manpower-planning for at least 100 to 150 scientists per year. The time is now appropriate to give serious thought to the development and training of manpower in highly diversified fields of ocean science and technology in our country.

"Two methods are being tried for developing and increasing the rained manpower by the Department of Ocean Development. In implementing both these methods, the basic opportunities in universities and technical institutions are also being strengthened. The first is the inhouse training, and the second is the award of fellowships and research associateships. The former is undertaken in different types of institutions. Organisations like the Council of Scientific and Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR), Ministry of Agriculture, the Geological Survey of India (GSI), Indian Navy and Merchant Navy will be used for the inhouse training to suit specific requirements. No matter where the R&D programmes are undertaken in ocean science and technology, the utilization of ship-board facilities and orientation courses in ocean science, will be the most important component.

"There are several institutions and universities in the country which can take up training programmes. At the same time, many universities and IIT's have started new programmes in ocean science. But to meet the required number during the next few years, training in ocean science will have to be increased in all the institutions which are interested in marine science. The Department of Ocean Development has provided extra positions of scientists and technicians in several institutions during the year.

"The second method has been the award of fellowships and research associateships to about 125 persons per year in different centres, universities and central organisations, which are involved in marine oriented work. The fellowship scheme has certain distinct advantages as no major institutional set-up is required for this purpose. The scheme for the award of these fellowships has to be more broad-based covering the entire country. The existing centres of excellence can be used to take on new fellowships in specialised branches of marine science and technology. One of the goals of this method has been to develop a reservoir of young scientists, with Ph.Ds. and Master degrees in different fields, wherefrom they could be drawn, as potential future marine scientists, in specific mission-oriented work on research vessels, in the Exclusive Economic Zones, deep sea and the Antarctic programmes. Another advantage of such a reservoir of scientists, is, that they have their roots in those institutions from where they are drawn for specific work, so that they can continue to carry out their investigations in the parent institutions.

"Both the methods are being implemented by my Department, and the response towards the fellowships and research associateships scheme from various institutions, has been extremely encouraging and enthusiastic; many fellows and research associates are already in position.

"The earliest univer ities to start marine science courses were fittingly the two of the oldest universities in our country, namely, Bombay and Madras. In 1927, the Zoological Research Laboratory of the University of Madras was established with Prof. R. Gopala Ayyar as its Honorary Director. The main objective of this research laboratory was to promote research in tropical marine biology and to provide training in basic zoological research. At about the same time, teaching and research in marine biology were initiated by Prof. P.R. Awati, at the Royal Institute of Sciences, Bombay. The Taraporevala Marine Biological Research Station, affiliated to the Bombay University, started functioning in 1951. This fine acquarium, with living marine forms, contributed immensely in generating public interest on marine life in the country. Pioneering work was carried out by these two institutions in various fields of marine biology. Studies included plankton biology, fouling organisms and molluscs, various types of fishes and a variety of other fauna and flora. Although some work on physiological aspects still continues at the Madras University, all activities at the Bombay University came to an abrupt end in mid-sixties.

"At Waltair, on the east coast of India, the Department of Zoology of the Andhra University was established in 1947, for teaching and training at the postgraduate level, with specialization in marine biology, and to carry out fundamental research in this field. In 1949, oceanography and meteorology were also taught at the Department of Geophysics, Waltair, Teaching and research facilities became available in the field of marine geology under a separate Department of Geology. In 1952 the University initiated what could be regarded as the first concerted effort to carry out multidisciplinary oceanographic research in India, especially in off-shore waters. So far, the oceanographic studies were largely restricted to the coastal areas and the work carried out was mostly biological in nature. The early emphasis on marine biological research could be attributed to :

(a) the growing need for the exploration of living organisms and the optimum exploitation of marine food resources;

(b) the relatively simple and inexpensive apparatus required for marine biological work; and

(c) the availability of trained personnel in marine biology to carry out such work.

"In 1953, the Annamalai University set up a Marine Biological Station at Parangipettai, with Prof. R.V. Seshaiya, as its Director. Prior to that, the research work in marine biology in this University was carried out in the Department of Zoology. In 1962, the University changed the status of the station to a Department of Marine Biology, and in 1963, the University Grants Commission recognised this department as a Centre for Advanced Study in Marine Biology, which serves now as an all India institution. Enjoying close links with some of the British Institutions of marine sciences (Universities of Southampton and Aberdeen), it has several useful bilateral exchanges of scientists with these institutions. Commendable researches on various aspects of marine sciences are being carried out by this centre in the Vellar estuary, in the surrounding back waters, mangroves and in the Bay of Bengal. These include hydrographical and hydrochemical studies in the estuarine and near shore waters, microbiological studies, mangrove ecosystem research, studies on primary production, plankton studies, taxonomical and ecological studies in molluscs and fishes, estuarine biology and biochemical studies on marine or organisms.

"The location of this centre at Parangipettai offers a wide range of excellent opportunities for estuarine and marine biological research. The area is also interesting because of the presence of the mangrove forest at Pichavaram. The main thrust areas for research of the Centre at present are: coastal water-quality-assessment, pollution-monitoring, environmental-inventory and toxicological studies microbial biodegradation and decomposition in the marine environment; ecosystem analyses, with special reference to mangroves, estuaries and swamps along Tamilnadu coast; systematics, ecology, breeding biology and laboratory culture of coastal marine fish and shellfish and their larvae. The fact that during 1980-83, 37 candidates have earned Ph.D. degrees in this Centre is a very impressive record of performance. The Centre has also been publishing a large number of original papers every year.

"From the foregoing account, it is clear that very useful and pioneering contributions have been made by the Universities in various disciplines of oceanography, before the research institutes such as the Central Marine Fisheries Research Institute (CMFRI) and the National Institute of Oceanography (NIO) were established in the country. Coastal and estuarine regions, in the proximity of several of these universities, were intensively investigated and many interesting oceanographic features became known as a result of their efforts. Fundamental work on the fauna and flora along the Indian coast was done at the universities and many new species, which were not known before, were discovered. Some of the universities participated actively in the International Indian Ocean Expedition (IIOE), 1962-65.

"In addition to enhancing our knowledge of the Indian sea, the universities have made the most vital contribution by providing trained manpower which has put the country on a sound footing for the development of marine science. Cochin and Andhra Universities have introduced specialised courses leading to postgraduate degrees in the fields of physical oceanography, marine chemistry, marine geology and marine geophysics. By doing so, they have ensured, that trained persons required by the various research institutes and fisheries organisations, are continuously made available. Thus, a very close link exists between the universities and the research institutes, as many of the scientists working in the institutes register themselves for higher degrees at the universities. It can, therefore, be concluded that the role of universities in the development of marine sciences has been enormous.

"In recent years, the Department of Ocean Development has started three new projects. The Antarctic research, exploration of polymetallic nodules and extraction of energy from the sea. In the Antarctic Research, as you are aware, the third expedition has already landed and this team contains several scientists from the universities. This programme has ushered in a new era of polar research in our country, which, above three years ago, was non-existent. Today, there are 20 institutions or more in the country which are working on the data and material collected from the Antarctic water and from the frozen continent of Antarctica. In the programme on exploration of polymetallic nodules. nearly 100 scientists, engineers and technicians from nearly 15 institutions in the country are involved. This is the largest team that has ever been deployed anywhere in the world and the technology used in not only on par with that of the most developed countries in the world, but in certain respects even superior. We are transmitting the coded data from the Central Indian Ocean, continuously, to the National Institute of Oceanography, Goa. In the project "Energy from the Sea," the Indian Institute of Technology, Madras, is playing a key-role and the facilities and manpower developed by them on wave energy are indeed highly commendable.

"Mr. Chancellor, Ladies and Gentlemen, in the short time at my disposal, I have tried to summarize the role of the Universities and that of a few other institutions in building up the much-needed manpower requirements of our country in the ocean sector. However, I must confess that despite these praiseworthy efforts, there is a lot to be done in future, so that the Indian Ocean, which has been washing the shores of our country, since millions of years, will play an important role in the technological development of the country in such a way, that, the sea will continue to provide our social, economic and recreational needs for a long time to come. In this process, I am sure, the role of the Annamalai University will become more and more important in future. . ." ☐

Seminar on Management Concepts for Higher Productivity of Educational Institutions

The Centre for Management of Productivity, Bangalore in association with Rashtreeya Sikshana Samithi Trust, also at Bangalore, proposes to organise a 2-day National Seminar on 'Management Concepts for Higher Productivity of Educational Institutions' on 14th and 15th April, 1984 at Bangalore. Delegates to the seminar would be those concerned with the management of societies and trusts managing higher educational institutions, principals of the colleges, deans, departmental heads, registrars and their deputies and functionaries concerned with administration of academic and research institutions, etc.

The seminar is being organised against the background of the metamorphosis that has come over the educational scene in India over the years and the widely held belief that the existing pattern of education is irrelevant and dysfunctional to the needs of society. For educational institutions to be more effective and efficient, the Centre feels that it would be necessary that efforts are made for increasing their productivity. Improved productivity and excellence in education, the centre feels, is possible by the application of concepts and principles of modern management.

The seminar would highlight the challenges and emerging trends in higher education and focus on the problems arising therefrom of sponsoring organisations. It would also stress the need and urgency for professionalisation of management in societies etc managing educational institutions besides contributing to develop awareness and understanding about application of modern management concepts and techniques for improving educational productivity.

Prof. V.V. John, former Vice-Chancellor of Jodhpur University is expected to inaugurate the seminar. Amongst those likely to address the different sessions of the Seminar are Prof K.S. Hegde, VC, University of Mysore, Dr D.M. Nanjundappa, VC, Karnatak University, Prof. N.S. Ramaswamy of IIM, Bangalore, Shri Sharu Rangnekar, Member, Board of Governors, NITIE and Dr K. Pennathur.

Panjab Varsity conference of principals, programme officers and youth leaders

Prof. R.C. Paul, Vice-Chancellor, Panjab University, stressed the need to bring about radical changes in the text-books in our schools, colleges and universities in order to ensure that every student received a fair idea of the country. He said that efforts should be made to narrow down the gaps in the educational levels of different areas and segments of our society. There should be reassessment of India's history and heritage with a view to project the forces of integration inherent in our cultural heritage.

Prof. Paul made these remarks while inaugurating a 2-day Conference of the Principals, Programme Officers and Youth Leaders organised by the NSS Department of the University.

Prof. Paul suggested that it should be impressed upon every individual that violence had never solved any problem. On the contrary, it had aggravated the gravity and complexity of the problems. Holy books and places of worship, irrespective of caste, creed or colour, deserve to be held in high esteem and the very thought of their sacrilege must be shunned as abominably ignoble.

Mr. Gurdev Singh, Programme Coordinator, said that in each college a "Task Force" was being set-up to undertake Programmes in emergencies like theft, fire and protection of national property. The members of the task force would be expected to report at the scene of the accident immediately and try to help the people in distress in every possible way.

All India Hindi seminar at Gauhati University

An All India Hindi Seminar sponsored by U.G.C. was held for four days from 28th Nov. to 1st December 1983 under the auspices of Hindi Department of Gauhati University on the subject "An exploration of Non-Vaishnavite trends in Medieval Hindi Bhakti Literature".

The programme of the Seminar was divided into six working sessions besides an inaugural function in the beginning and a concluding session in the end.

Dr. S.D. Singh, Prof & Head of the Hindi Department, Gauhati University and Director of the seminar has informed that all the sessions were thought-provoking, supplemented by thorough research of the materials and its interpretations. Some of the papers explored new areas and dimensions of Non-Vaishnavite trends on the abovesaid subject. For instance Prof. S.K. Mishra (Sardar Patel University) threw new light on the definition and characterization of Vaishnavite and Non-Vaishnavite trends, Prof R.M. Tripathy (Vikram University) on Sufi literature, Dr. P. Rai (Magadh University) on Saint Literature, Prof Jagadish Gupta (Allahabad University) on Krishna Literature and Prof R.K. Megh (GND University) on Rama Literature. Prof Megh also emphasized the need for utilizing the archaeological material as well as material obtained from paintings, sculptures etc. The inaugural address was given by Prof M. Neog and presided over by Dr. B.K. Bhattacharya. The concluding session was addressed by Dr. J.M. Choudhury, Vice-Chancellor of Gauhati University.

Under each session, one major research paper was presented followed by a number of subsidiary papers and thorough discussions.

It was agreed upon that influences of Siddha's (Buddhism), Natha's, Shaiva's, Shakta's and Islam were to be thoroughly explored in various forms and shades along with other minor influences in the broad context of the developments of Indian culture.

A VC's get-together for students' union office bearers

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, asked the students to work hard to regain the prestige and academic excellence which the university enjoyed as a pioneering institution. He said only hard work and discipline can make the students worthy and responsible citizens.

Mr. Syed Hashim Ali was addressing the Students' Union office-bearers of the Campus and Constituent Colleges of Osmania University at a get-together in the Vice-Chancellor's Lodge. While congratulating the students for conducting elections in a peaceful manner, he said students were welcome to meet the officials and discuss their problems in small numbers but not in mobs. He said all problems should be solved at the college level with their concerned heads, Principals and Deans. He said, to meet the growing needs of the teachers, staff and students, the university was thinking of starting a Development Fund with contributions from former students, staff and philanthropists.

He said the students should explore their latent talents in extra-curricular activities like debating, music, drama and sports. He said many students did not know their full potential and were not fully utilising their capabilities.

The Vice-Chancellor asked the students to take up constructive activities. He asked the students to clean the walls and college buildings and promised to white wash the buildings after they were cleaned. Some college office-bearers offered to take up this project immediately.

Prof. T.Navaneeth Rao, Rector, Prof. P.S. Ramachandran, Registrar, Principals of the Colleges and students' union advisers were present.

Poetic symposium on communal harmony

A poetic symposium on communal harmony way held at the Punjab Agril. University last week. This symposium was organised by the Punjab Agril. University Teachers' Association, PAU non-teaching workers' union, PAU young writers' association, Guru Gobind Singh Study Circle, Directorate of Students' Welfare and various cultural bodies of the University.

Dr. Sukhdev Singh, Vice-Chancellor of the PAU who presided over the function said that no religion had ever preached hatred among the people. He further said that religious tolerance should be given preference in every walk of life. He cautioned the students and the staff to beware of the devisive forces which were bent upon disintegrating the country.

Bibi Amar Kaur, Sister of Shahid-e-azam Bhagat Singh speaking, on this occasion appealed to the students to safeguard the hard won freedom and reminded them of the sacrifices made by the great martyrs for the liberation of the country.

U.S. envoy visits Cochin University

The American Ambassador to India, Mr. Harry G. Barnes Jr. visited the Cochin University recently and he had detailed discussions with the Vice-Chancellor, Dr. K. Gopalan, and other officials on the various academic and research programmes of the University.

The Ambassador also visited some of the laboratories and showed keen interest in the research and development work going on in them. Several members of the faculty of the University had worked in American Universities and there were informal linkages between some of the American Universities and Cochin University in several emerging areas of science and technology. The Ambassador agreed that these linkages eould be formalised with a view to make such collaboration more meaningful and purposeful. He assured his full support for bringing about such formal linkages in emerging areas of mutual interest.

Mr. Harry G. Barnes Jr. (right), US Ambassador to India, with the Vice-Chancellor of Cochin University.

Course in Indian languages at TU

The Tamil University plans to conduct a four-week intensive course in Kannada and Marathi at the Postgraduate level from 2nd April to 28th April, 1984. A certificate will be awarded to the successful candidates who will have to pay a sum of Rs. 100/- as tuition fee and a sum of Rs. 25/- as examination fee. Further information can be had from Dr. S. Rajaram, Associate Professor, Department of Tamil Studies in Foreign countries, Tamil University, Thanjavur.

College teachers' research council formed

The first convention of the Assam College Teachers' Forum for Research Activities was held recently at Gauhati under the presidentship of Dr B. C. Lahkar, Principal, Gauhati Commerce College.

The convention resolved to form a State level organization of College teachers engaged in research activities under the name "The College Teachers' Research Council, Assam'. The aims and objectives of the Council include (a) to strive for and contribute towards the development of research activities among the College Teachers of Assam vis-a-vis the Region; (b) to work for providing necessary research facilities in the affiliated colleges; (c) to help the development of group and interdisciplinary research; (d) to strive for achieving due status for its members in the society.

IIT Kanpur to celebrate silver jubilee year

The Indian Institute of Technology, Kanpur has designated the period form August 1, 1984 to July 31, 1985 as its Silver Jubilee Year. A series of events has been planned. These would include a travelling exhibition of achievements by its alumni, special symposia of interest to industry and alumni, special lectures, special convocation, institution of awards for distinguished alumni, etc.

Prof. A.S. Parasnis, Professor of Physics and Chairman, Silver Jubilee Committee, IIT, Kanpur would welcome contact from alumni and their parents, interested industries and well wishers.

CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/Seminar/Symposium/Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks
March 21-22, 1984	Kisan Mela	Theme will be "Management in Agriculture"	Punjab Agricultural University, Ludhiana	—	A large number of farmers and farm women from Punjab and adjoining States are expected to participate.
March 28-31, 1984	Indian Music and Philosophy: Interrelationships in Concepts	To examine the common concepts in Indian Music and Philosophy	Faculty of Performing Arts, BHU, Varanasi	Prof (Smt.) N. Rajam, Director & Dr. (Smt) Vimla Musalgaonkar, Convener	—
April 14-16, 1984	National Conference on "Towards a Learning Society Through Life-Long Education"	Intended to provide a blend of academic content and experiential learning.	Indian Society for Community Education, Ahmedabad.	Dr. Y.N. Mishra, Conference Secretary, Centre of Adult/Continuing Education, BHU, Varanasi.	—
May 2-9, 1984	Third Training Programme on "Manpower Forecasting"	Aims at imparting knowledge to those responsible for manpower assessment and planning at the national, state, district and organisation levels about the basic approaches and techniques involved in manpower forecasting.	Institute of Applied Manpower Research, New Delhi.	Dr. D.D. Upreti, Sr. Research Officer, IAMR, New Delhi.	—
June 11-16, 1984	Short Term Course on Digital Image Processing (Sponsored by the Electronics Commission)	To provide an introduction to the basic concepts and techniques for digital image processing and to lay a foundation which can be used as the basis for further study and research in this field.	Department of Electronics and Electrical Communication Engg., IIT, Kharagpur.	Prof. B.N. Chatterji & Dr. R.N. Pal, Coordinators.	—

Cochin University identified for computer education pilot project

The Government of India has identified Cochin University as one of the back-up institutions to participate in the computer education pilot project launched by it.

The project aims at imparting computer literacy at school level. To begin with, the project is to be taken up on a pilot basis in 250 schools all over the country. In the pilot stage, the objectives of the project will be limited to imparting computer appreciation-cum-education to secondary school students. The existing teachers of physics, chemistry, mathematics and commerce will be given suitable training for implementing the programme in the schools.

For each cluster of schools a back-up institution has been identified by the Government of India for providing logistic, academic and teacher training support. Cochin University has been chosen to service a cluster of 10-20 schools in the State. The project will be implemented by the University's Department of Electronics.

Home nursing camp for girls at Bhavnagar University

Recently, from 5 December to 12 December, a home nursing camp was held in Sir P.P. Institute of Science, Bhavnagar University, under the auspices of N.S.S. Unit of the University, with the aim of training the college girls in home nursing i.e. first aid, mothercraft, and hygiene etc. 150 participants in the camp were taught the above by Padmashri Bakulaben Patel of St. John Ambulance Association (Gujarat State Centre), Delhi. The girls were demonstrated different types of bandages, artificial respiration, structure formation etc. They later visited government hospital for practical experience. Besides maintaining their own homes well in future, these trained girls will be of great help in the event of natural calamities (floods, cyclones etc.), wars and the accidents.

Social worker and doctor Smt. Bhanuben Parekh inaugurated the function. Dr. Bharatbhai Trivedi was guest of honour and the closing ceremony was done under the chairmanship of Smt. Ushaben Patel.

Maharashtra State to review education policy

The Education Minister of Maharashtra, it is reported has stated that the Government of Maharashtra would overhaul its education policy. A Committee headed by the State Education Minister has been appointed to prepare a blueprint for this purpose. The report of the Committee is expected to be ready by the end of this year.

The Committee, which would include eminent educationists, would review the education policy from primary to university level and prepare a master plan for implementation during the Seventh Plan period which begins from April, 1985.

Report of Parliament Committee on welfare of SC/ST

The Committee on the "Welfare of Scheduled Castes and Scheduled Tribes" of Parliament has, it is reported, made, *inter alia*, the following observations:

- It has reiterated that the Aligarh Muslim University should, as done by other universities, provide 15 per cent reservation for Scheduled Castes and 7½ per cent reservation for Scheduled Tribes students for admission to the MBBS Course. The Government of India has been asked to pursue this matter in right earnest.
- The Committee has said that it is unable to understand as to why in the Delhi University, reservations in post-graduate courses for SC/ST students, will be available only when the number of seats is more than seven. The Committee wants the Government to ensure that the reservation orders are followed irrespective of the number of seats.
- The Committee has recommended to the Government to take a decision to provide reservations for SC/STs in the Indian Institutes of Technology in teaching and technical posts at all levels.
- In cases where separate admission tests are held and SC/ST students are required to pass the same for getting admission, necessary relaxation in marks should be given to them so that the seats reserved for SC/ST students are filled up.

AIU News

Display of AIU Publications

The Association of Indian Universities (AIU) has a number of publications in the field of higher education. These are popular among the academics, researchers, students and others connected with higher education. AIU displays publications at special functions of universities like jubilee celebrations, international/national conferences, workshops/convocations, book exhibitions, etc. In the immediate past AIU has organised displays at the following universities:

1. Gulbarga University, Gulbarga
2. Indian School of Mines, Dhanbad
3. Rani Durgawati Vishwavidyalaya, Jabalpur

Universities who wish AIU to display publications may please write to the Sales and Publications Officer, Association of Indian Universities, AIU House, 16 Kotla Marg, New Delhi-110002.

GDR ready for further collaboration with Cochin University

His Excellency Mr. Heinz Birch, Ambassador of the German Democratic Republic in India who visited Cochin University on February 10, stated that the GDR would be ready to consider the next phase of collaboration between Rostock University and Cochin University in the area of Ship Technology and Naval Architecture.

The GDR Ambassador visited the Department of Ship Technology and had discussions with the Vice-Chancellor Dr. K. Gopalan and other officials of the University. The Ambassador showed particular interest in some of the major ongoing research projects in the Department in the area of Computer aided ship design and Non-linear analysis of ship structure strength.

The collaboration between Rostock University and Cochin University in the area of ship technology started about 10 years ago. The Cochin University is one of the very few centres in the country producing ship technologists and naval architects. The University has plans to start an M.Tech. programme in Ship Technology and Naval Architecture.

Osmania Varsity's Newsletter

Shri Syed Hashim Ali, Vice-Chancellor of Osmania University, Hyderabad has, in a communication, stated that a monthly Newsletter addressed to the students by him has been started in the university. The object of the Newsletter is to develop better rapport between the students and the university authorities. Two Newsletters have been published so far.

Surendra Nath Barua memorial cricket tournament

Recently Gauhati University Teachers' Association (GUTA) organised a cricket tournament amongst the college and university teachers of Gauhati University in the Gauhati University Sports ground. The trophy was donated by Dr. (Mrs) A. Barua, in memory of her departed husband, Late Surendra Nath Barua, who was a sportsman and was actively associated with sports and games of Gauhati University.

Altogether eight teachers' teams joined the tournament.

In the final match B. Barua college defeated Veterinary College by 7 wickets and won the Memorial trophy.

Plan Outlay on Education

The Plan Outlay on Education for the year 1984-85 as revealed in the Budget Estimates presented to Parliament on 29th February 1984 is as follows : Centre : Rs. 203.65 crores; States: Rs. 554.39 crores; Union Territories : Rs. 73.22 crores; Total : Rs. 831.26 crores.

Seminar on aspects of history and culture

The Faculty of History and Archaeology of Besant Theosophical Post-Graduate College, Madanapalle (Andhra Pradesh) organised a two-day seminar on Aspects of History and Culture, as a part of COHSSIP of UGC. The Director of the Seminar was Prof. S. Sripathi Naidu.

The seminar was inaugurated on 25th Feb. 1984, and the keynote address was delivered by Dr. Alladi Vaidehi, Professor of History, Osmania University, Hyderabad, who emphasised the need for a study of the cultural aspects.

In the afternoon session four papers on various temples were presented.

On 26th February 1984, papers were presented on Indian coins through ages, Mughal History, Mughal Art and Architecture.

News from Agril. Varsities

Farm business management course inaugurated

Dr. Sukhdev Singh, Vice-Chancellor of the Punjab Agricultural University said that the farmers should learn to keep the accounts of their income and expenditures as agriculture had become a business rather than simply a way of life. He further said that despite increase in the income of the farmers, as a result of green revolution the standard of living in the villages had not improved much and rural houses still lacked basic amenities of life. Dr. Sukhdev Singh called upon the educated rural youth to start other profitable professions like poultry farming, dairying and mushroom growing to supplement their income.

The Vice-Chancellor was inaugurating the first three month training course in agricultural business management being organised by PAU. The training which is being jointly organised by the Departments of Business Management and Extension Education of the PAU is being attended by 25 educated farmers.

The Vice-Chancellor said that apart from this training the trainees should also be acquainted with the working of Government and Semi-Govt. agencies and Commercial Banks involved in the Rural Development Programme.

HAU working to be reviewed

A review of the working of different departments of Haryana Agricultural University (HAU) has been planned with a view to identifying the deficiencies, keeping in view the best available expertise in the country", said Mr. L.D Kataria, Vice-Chancellor, HAU while addressing a press conference at Hissar recently. He said, "this is being done to chalk out a phased, time-bound programme for achieving required excellence wherever such deficiences exist".

Shri Kataria further disclosed that for fuller utilisation of man-matter and material resources available in the University, it has been decided to review the ongoing research programmes of different schemes.

"This, he said, "is all the more necessary when projections for the seventh Five-Year Plan are being finalised so as to cover the existing deficiencies, if any and to give greater thrust to the areas which required immediate attention. Screening efforts in this direction would obviously help in eliminating unproductive schemes, he added.

Shri Kataria, who assumed charge recently, said that he had decided to have a status paper prepared on various achievements in the fields of teaching, research and extension education so as to have a realistic assessment of the excellence attained so far. It is necessary at this stage to have an indepth assessment of the relevance of these achievements in relation to the required needs for the agricultural development of the State as a whole.

In an answer to a question regarding the extension services of the University he said that in order to transfer speedily and more effectively the new technology to the farmers the District Extension Specialists meant for the purpose need to be periodically up-dated in their knowledge by evolving a system of built-in training programmes in their related fields.

The University he said, would lay special, emphasis on the 20-point programme for the upliftment of the marginal and landless farmers.

He also proposed to intensify research efforts relating to socio-economic needs of the farming community in the State. Multi-disciplinary programmes involving faculty of home science, basic sciences, agriculture, and animal sciences, will have to be initiated to have indepth evaluation of the socio-economic constraints so that the concerned departments of the State Government can be approached for tackling the problems in a multi-dimensional way.

News from Abroad

Strong demand for university places in Australia

Very strong competition for places in all Australian universities in 1984 was reported at a meeting of the Australian Vice-Chancellors' Committee held at the University of New England recently.

"This strong demand emerging for university places represents a marked change in the aspirations of young people compared to those several years ago and is indication of a keen interest in university education", said the chairman, AVCC, Professor Michael Birt.

At the request of the Australian Government, the universities have increased opportunities for school leavers. The universities. have, however, been forced to set intake quotas which are limited by their available money and buildings.

In many instances, the numbers of qualified applicants have exceeded significantly these intake quotas. For school leavers, the minimum cut-off scores to secure entry have risen sharply compared to the corresponding situation in 1983.

Projected total enrolments in most universities will exceed their planned student loads for the current 1982-84 triennium. This has been caused by a continuing shift of students to full-time enrolments, the greater retention of later-year students in undergraduate courses, together with increased participation in postgraduate and research-degree programmes. More universities have now been forced to impose limitations on their intakes of higher degree students.

[*Courtesy*: Media Release of Australian Vice-Chancellors Committee]

Sports News

Sports Authority to get Rs. 4 crores

Sports Authority of India, a newly created organisation, would get a grant of Rs. 4 crores, according to the budget proposals of the Department of Sports for the year 1984-85. The plan allocation for Sports in the Central budget is Rs. 8 crores for the year 1984-85. The Centre has proposed Rs. 26.05 crore budget for the Sports Ministry for the year 1984-85. This represents an increase of Rs. 6.72 crores over the previous year.

Three new events likely in Seoul Asiad

The Seoul Asian Games Organising Committee has decided the dates for holding the 10th Asiad in 1986 to be held from September 20 to October 5.

The Organising Committee also prepared the schedule for the games which will be presented in September for approval to the Olympic Council of Asia. The Committee has included three additional events—Bowling, Teak-Wondo and Judo—to the list of events staged at the 1982 Asiad in New Delhi. This will bring the total number of events to 25.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

PHYSICAL SCIENCES

Statistics

1. George, Sabu. *Stable stochastic process and applications.* U Ker, Trivandrum. Prof. R.N. Pillai.

Physics

1. Fardinand, K.V. *Electron transport properties of compound semiconductor thin films.* U Delhi. Dr. P.C. Mathur.
2. Gaur, Archana. *High energy interactions.* U Delhi. Dr. R.K. Shivpuri.
3. Harinder Singh. *Plasma physics.* U Delhi. Dr. K.L. Vithal.
4. Kapoor, Vijay. *High energy physics.* U Delhi. Dr. R.K. Shivpuri.
5. Kumar Sanjay Krishna. *Mossbauer studies of ferrites and thin film phenomenon.* U Delhi. Dr. J.S. Baijal.
6. Pahwa, Des Raj. *Acoustic sounding and environmental studies.* U Delhi. Dr. S.P. Singal and Dr. A.P. Mitra.
7. Parthasarthi Kumar. *Non-perturbative methods in atomic and molecular physics.* U Delhi. Dr. R.P. Saxena.
8. Pasricha, Anita. *Study of materials for new applications.* U Delhi. Dr. Abhai Man Singh.
9. Rajaram, B.M. *Semiconductor material technology and particle interactions with semiconductors.* U Delhi. Dr. R.K. Shivpuri.
10. Saksena, Purnima. *Non-linear plasma theory : Laser, plasma interaction.* U Delhi. Dr. M.P. Srivastava.
11. Sharma, Kishori Lal. *Nuclear structure of some medium heavy nuclei.* U Delhi. Dr. J.B. Gupta.
12. Sharma, Satendra. *Study of nuclear structure of some medium mass nuclei.* U Delhi. Dr. J.B. Gupta.
13. Sinha, Kumar Virendra. *Scattering of electrons and positrons from gases.* U Delhi. Dr. P.S. Grover.
14. Sinha, Manoj Kumar. *Investigation of hyperfine fields in rare-earth nuclei by time differential PAC method.* U Delhi. Dr. S.L. Gupta,

Chemistry

1. Anil Krishan. *Theoretical chemistry.* U Delhi. Dr. K.K. Sharma.
2. Bhalvankar, Ramachandra Bhagwan. *Kinetics of some catalysed reactions.* Shivaji U. Dr. N.G. Zunjurwad.
3. Chauhan, Virender Singh. *Studies on glycosidic principles of indigenous drugs.* HS Gour. Dr. G.C. Jain.
4. Gaikwad, Hemlata Chandrashekar. *Reversed phase paper chromatographic studies with aliquot.* Shivaji U. Dr. V.M. Shinde.
5. Gautam, Rakesh. *Studies on the toxic constituents of* **Euphorbia** *drugs.* HS Gour. Dr. D.K. Mukharya.
6. Gupta, Rakesh Kumar. *Phytochemical investigation of some indigenous medicinal plants.* HS Gour. Dr. V.K. Saxena.
7. Nirmala, P. *Organic chemistry of natural products.* U Delhi. Dr. A.C. Jain.
8. Parida, G.R. *Electrochemistry.* U Delhi. Dr. N.R. Banerjee.
9. Sajadian, Sayed Kumar. *Bisplanar heterocyclic compounds.* U Delhi. Dr. S.V. Eswaran.
10. Sharma, Ram Rattan. *Organic compounds of metals.* U Delhi. Prof. R.N. Kapoor.

Earth Sciences

1. Singh, Pradeep Kumar. *Depositional sedimentary environments.* U Delhi. Dr. D.M. Banerjee.

Engineering & Technology

1. Tara Singh. *Studies on non-edible oils.* BHU, Varanasi. Dr. A.N. Srivastava and Dr. D.C. Rupaiwar.

BIOLOGICAL SCIENCES

Botany

1. Bajaj, Madhu. *Reproductive biology.* U Delhi. Dr. K.R. Shivanna.

2. Basu, Atanu. *Photobiological aspects of plant growth and development.* U Delhi. Prof. S.C. Maheshwari and Dr. A. Rashid.

3. Dantu, Prem Kumar. *Morphogenetic study in angiosperms.* U Delhi. Dr. Sant S. Bhojwani.

4. Gaikwad, Sanjay Ganapat. *Physiological studies in millets:* **Setaria italica (L).** *Beauv.* Shivaji U Dr. B.A. Hegde.

5. Kapoor, Seema. *In vitro morphogenic studies in angiosperms.* U Delhi. Dr. S.C. Gupta.

6. Kapoor, Shama. *Embryology of angiosperms.* U Delhi. Dr. S.P. Bhatnagar.

7. Mulik, Nihanjana Gopalrao. *Studies on some aspects of mangroves.* Shivaji U. Dr. (Smt.) L.J. Bhosale.

8. Nanda Kumar, P.B.R. *Reproductive biology of angiosperms.* U Delhi. Dr. K.R. Shivanna.

9. Verma, Bharti. *Histochemistry and ultrastructure of some food legumes.* U Delhi. Dr. C.B. Sehgal.

10. Yunus Ali. *Plant physiology and biochemistry.* U Delhi. Dr. S.C. Maheshwari and Dr. A. Rashid.

Zoology

1. Anand Kumar. *Insect reproduction.* U Delhi. Dr. S.S. Sehgal.

2. Bijay Kumar. *Microbial insecticides interactions.* U Delhi. Dr. D.M. Saxena.

3. Manoj Kumar. *Studies on the biochemical aspect of ageing in flesh fly.* HS Gour. Dr. G.C. Jain and Dr. U.S. Gupta.

4. Samuel, D. *Studies on the helminths parasitic in anamniotes of Kerala and Kanyakumari District.* U Ker, Trivandrum. Dr. P.V. George.

5. Srivastava, Anita. *Entomology.* U Delhi. Prof. M.K.K. Pillai.

6. Urfi, Abdul Jamil. *Histophysiological studies on fish muscle.* U Delhi. Prof. C.L. Talesara.

Medical Sciences

1. Mukherji, Gour. *Development of drug delivery systems using anti-cancer drugs.* U Delhi. Dr. G.K. Narayanan.

2. Ravi Chandran, T.K. *Development of pro-drugs of benthadiazine diuretics.* U Delhi. Dr. G.K. Narayanan.

3. Tiwari, Anil Kumar. *Physiological studies on lens with particular reference to cataractogenesis.* BHU, Varanasi. Prof. H.V. Nema.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Bathul, Shahnaz. *Three dimensionql flows and heat transfer over a porous plate.* IIT, Kharagpur.

2. Chakraborty, Monotosh. *Theoretical study of some problems on seismic wave propagation.* ISM, Dhanbad.

3. De, Ranjan Kumar. *Theoretical study of a few problems on seismic waves.* ISM, Dhanbad.

4. Ghosh, Debidas. *On some problems of applied algebra and integral transforms with certain applications in reliable logic design of digital circuits.* U Calcutta.

5. Jain, Nirmala. *Some problems on fixed point theorems.* HS Gour, Sagar.

6. Jha, Lakshmishwar. *On certain investigations in theory of measure and perfect measure.* LNMU, Darbhanga.

7. Kalyanshetti, Shidramappa Bacalingappa. *Studies in Einstein-Cartan theory.* Shivaji U, Kolhapur.

8. Ngangbam, Ibohal Singh. *Collineations in theories of gravitation.* Shivaji U, Kolhapur.

9. Paramguru, Renuka. *Integral equation solutions of some crack problems.* IIT, Kharagpur.

10. Raja Sekhara, S. *Mathematical analysis of some flow instabilities.* Sambalpur U.

11. Sensarma, Samar. *Pathological studies of some graph algorithms and their computer implementation.* U Calcutta.

12. Shah, Archana. *Some results in general relativity.* Kum U, Nainital.

13. Shantha, R. *Problems relating to some basic concepts in bitopological spaces.* U Calcutta.

14. Subhash Chand. *Stability of some flows with special emphasis on the stability on non-viscous, compressible flows.* Kanpur U.

15. Suryanarayana, B.V. *Some constrained stochastic facility location problems.* IIT, Kharagpur.

16. Ved Prakash. *Some problems on Fourier analysis.* HS Gour, Sagar.

17. Venkatanna, M.L. *A Thesis on thermohypo-elasticity.* IIT, Kharagpur.

18. Verma, Anant Ram. *Unsteady free convection in viscous fluids.* IIT, Kharagpur.

Statistics

1. Gupta, Chandra Kumar. *Some linear and non-linear stochastic models in biosciences.* Kanpur U.

2. Vaman, H.J. *Some sequential decision procedures.* Kar U, Dharwad.

Physics

1. Agarwal, Girish Kumar. *Static and dynamic properties of two-dimensional classical electron liquid.* Pb U, Chandigarh.

2. Ashrit Pandurang, V. *Transport properties of yttrium, ytterbium and samarium thin films.* Kar U, Dharwad.

3. Bedi, Subhash Chandra. *Hyperfine interactions by DPAC technique.* Pb U, Chandigarh.

4. Chandrasekharam, P. *Studies in solid state physics: Growth and characterisation of (ZnSe) × (CdTa) 1-x single crystals.* SVU, Tirupati.

5. Deshpande, Vilas Krishnarao. *Study of electrical conductivity of lithium sulphate based solid electrolyte materials.* Nagpur U.

6. Dhawan, Vinod Kumar. *Electrical properties of vanadium tellurite glasses.* U Delhi.

7. Gopinathan, R. *Studies on ice nucleants and atmospheric precipitation.* Anna U, Guindy.

8. Gundu Rao, K.S. *Studies on inner Bremsstrahlung accompanying beta decay.* U Mysore.

9. Jacob, A. Sundar. *Solid state spectra of certain transition metal ions in some double sulphates.* SVU, Tirupati.

10. Jagdish Singh. *Dynamics of Fermi liquids.* Pb U, Chandigarh.

11. Joshipura, Kamalnayan Narharprasad. *Electron scattering from atoms and molecules.* MSU, Baroda.

12. Mahapatra, Prasanta Kumar. *A study of bloch electrons in an electric field with special attention to stark ladders.* IIT, Kharagpur.

13. Pahuja, Om Parkash. *Statistical thermodynamics of some polymeric and monomeric solids.* U Delhi.

14. Ray, Arup. *Electron impact ionisation of atomic systems.* U Calcutta.
15. Santhanam, S. *Study of the electrical properties of SnTe single crystals and structural and electrical properties of SnTe thin films.* IIT, Kharagpur.
16. Sao, Firturam. *Study of electrical conduction in ferroelectrics.* RSU, Raipur.
17. Shah, Purushottam Mohanlal. *Study of the spectra of some of the diatomic molecules (NiBr, CoBr and NiCl).* MSU, Baroda.
18. Sharma, Avinash Chander. *Low energy hadronic matrix elements in a model simulating bag and harmonic oscillator dynamics.* Pb U, Chandigarh.
19. Singh, L.P. *Conformation of biomolecules.* Kanpur U.
20. Uthanna, S *Studies in thin films : Physical investigations on crystalline films of cadmium-selenium-tellurium system.* SVU, Tirupati.

Chemistry

1. Acharya, Sridhara. *Studies in nickel (IV) chemistry: Kinetic and mechanistic studies involving tris (dimethylglyoximato) nickelate (IV).* Berhampur U.
2. Agarwal, S.K. *Some addition reactions of terpenoidal and other olefinic compounds.* Kanpur U.
3. Agarwal, Vishhu Dayal. *Substituted cyanonitrosyl complexes of manganese.* Kanpur U.
4. Ajit Kumar. *Kinetics and mechanism of the oxidation of alphahydroxy acids by N-bromo succinimide.* Kanpur U.
5. Bagdi, Pushpa. *Cation transport across cell membrane: Chemical approach to the understanding of the phenomenon.* Devi Ahilya, Indore.
6. Bajpai, Arun Kumar. *Studies on biligand complexes of some 3d-block elements.* Kanpur U.
7. Bali, Anu. *Studies on chemical synthesis of modified phospholipids and possible use of their liposomes in drug delivery.* Kanpur U.
8. Bandyopadhyay, Dipti. *Studies on factors responsible for zinc availability in presence of phosphates.* U Calcutta.
9. Bardyopadhyay, Prabir Kumar. *Studies on synergism acid corrosion inhibition of mild steel by organic inhibitive species.* U Burdwan.
10. Basu, Amaresh. *Microbial enzymes studies on structure-function relationship of* **Kiebsiella aerogenes** *citratelyase* (*EC* 4, 13, 6). U Poona.
11. Bhavsar, Chandrakant M. *Physico-chemical properties of polystyrene ion exchangers and effect of gamma irradiation thereon.* U Poona.
12. Bhatia, Suresh Kumar. *Studies on synthesis and biosynthesis of natural products.* Kanpur U.
13. Brar, Sarvjit. *Physico-chemical studies of products of thermolysis and photolysis of some iron (III) complexes.* GNDU, Amritsar.
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Editor :

M.S. RAMAMURTHY

Rani Durgavati Vishwavidyalaya hosts AIU Standing Committee at Jabalpur

A meeting of the Standing Committee was held on March 3, 1984 at Rani Durgavati Vishwavidyalaya, Jabalpur under the Presidentship of Prof. R.C. Paul, Vice-Chancellor, Panjab University, Chandigarh. Dr. A.K. De, Director, IIT Bombay; Dr. M.S. Gore, Vice Chancellor, University of Bombay; Dr. Gurbakhsh Singh, Vice-Chancellor, Delhi University; Prof. P.V. Indiresan, Director, IIT Madras; Prof. Amlan Datta, Vice-Chancellor, Visva Bharati; Prof. K.S. Hegde, Vice-Chancellor, University of Mysore attended the meeting. Prof. S.V. Arya, Vice-Chancellor, Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur was specially invited to attend the meeting.

The following universities were admitted to the membership of AIU on a provisional basis for a period of three years:

(i) Guru Ghasidas University, Bilaspur (MP)
(ii) School of Planning & Architecture, New Delhi
(iii) Banasthali Vidyapith, Banasthali (Rajasthan)
(iv) Indian Veterinary Research Institute, Izatnagar (UP).

It was agreed to have a joint meeting of the Standing Committee with the members of the University Grants Commission in June/July, 1984. The following items are proposed to be discussed:

(i) Guidelines for Model Act for Universities;
(ii) Functioning of Students Union;
(iii) A Uniform grading system for universities/institutes of higher learning;
(iv) Allowances and service conditions of Vice-Chancellors and other university administrators;
(v) Scale of Pay for Instructors/Coaches for Sports/Physical Education;
(vi) National Testing Service for grading the merit and aptitude of students on a uniform scale ;
(vii) Setting up of community colleges for making education relevant to the needs of the society;
(viii) Revision of the pay-scale of postgraduate teachers; and
(ix) Guidelines for preparation of Seventh Five Year Plan proposals.

The Standing Committee also suggested that the problems of foreign students in India may be examined in detail. The President of the Association would be constituting a Sub-Committee shortly for this purpose. Their eligibility for admission, language requirement, allowances, board and lodging facilities available to to them in various educational institutions are some of the specific problems to be discussed. In order to strengthen the inter-action of general universities with the agricultural universities, it was suggested that the agricultural universities may develop the basic science departments further and the Faculties of Agriculture and related sciences in general universities be also expanded further, provided proper and adequate facilities are made available to them. Considering the various problems of agricultural universities, IITs and technical institutions and institutions deemed to be universities, the President will be constituting separate Standing Sub-Committees to consider the specific problems of these institutions. It was also decided to hold a competition for designing a Flag for the AIU.

The University of Bombay will be collaborating with the Association of Indian Universities in preparing guidelines for non-plan grants for universities based on analysis of data of recurring expenditure of universities. It is proposed to have a more detailed presentation for the Ninth Finance Commission so that universities may get adequate non-plan funds.

The following Sub Committees were also constituted:

(1) Service Conditions of the Vice-Chancellor

(i) Prof. TKN Unnithan VC, University of Rajasthan.
(ii) Dr. G.C. Gupta, VC, Kurukshetra University.
(iii) Shri Ghulam Hussain, VC, ND University of Ag. & Tech., Faizabad.
(iv) Shri L.D. Kataria, VC, HAU, Hissar.
(v) Dr. D.M. Nanjundappa, VC, Karnatak University.
(vi) Dr. M. Santappa, VC, University of Madras.
(vii) Dr. B.D. Sharma, VC, NEHU, Shillong.

(2) Security Force in the Universities

(i) Prof. K.S. Hegde, VC, University of Mysore.
(ii) Shri G.B.K. Hooja, VC, Gurukula Kangri Vishwavidyalaya.
(iii) Dr. V.D. Nagar, VC, Devi Ahilya University.
(iv) Dr. W.U. Malik, VC, University of Kashmir.
(v) Shri Syed Hashim Ali, VC, Osmania University.
(vi) Justice M.P. Kanade, VC, Marathwada University.

(3) A National Aptitude Testing System

(i) Prof. Rais Ahmed, Vice-Chairman, UGC.
(ii) Prof. M.M. Chakrabarty, VC, Jadavpur University.
(iii) Dr. P.L. Malhotra, Director, NCERT.
(iv) Shri Suresh Mathur, Secretary, UPSC.
(v) Shri P.N. Rau, Secretary, ICAR.
(vi) Shri Manmohan Singh, Financial Adviser, Ministry of Education
(vii) Shri S.K. Sharma, Commissioner, M.P. Government.

(4) Opening of Community Colleges

(i) Dr. (Mrs.) Madhuri R. Shah, Chairman, UGC.
(ii) Dr. (Smt) Jyoti H. Trivedi, VC, SNDT Women's University.
(iii) Dr. S.N. Mehrotra, VC, Jodhpur University.
(iv) Dr. M. Aram, VC, Gandhigram Rural Institute.
(v) Prof. Amlan Datta, VC, Visva Bharati.

(5) National Policy on University Libraries

(i) Prof. Rais Ahmed, Vice-Chairman, UGC

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Prof. M. S. Gore, Vice-Chancellor, University of Bombay, opening the AIU Book Exhibition organised at the time of the meeting of the Standing Committee of the AIU in Jabalpur.

- (ii) Dr. S.S. Johl, VC, Punjabi University.
- (iii) Dr. Jagdish S. Sharma, Librarian, Jammu University.
- (iv) Prof. P.N. Kaula, Visiting Prof. of Library, Lucknow University.
- (v) Shri T.S. Deshpande, Librarian, Karnatak University.
- (vi) Shri Girja Kumar, Librarian, JNU.
- (vii) Prof. A.P. Srivastava, Librarian, Delhi University.
- (viii) Dr. R. Mittal, Librarian, Punjabi University.

(6) **Teachers' Training at College Level**
- (i) Prof. G. Ram Reddy, VC, APO University, Hyderabad.
- (ii) Dr. N.M. Swani, Director, IIT Delhi.
- (iii) Shri P.N. Bhandari, VC, Mohanlal Sukhadia Vishwavidyalaya.
- (iv) Dr. P.L. Malhotra, Director, NCERT.

(7) **AIU Building Committee**
- (i) President, AIU
- (ii) Immediate Past President
- (iii) Vice-President
- (iv) Prof. B. Dias Souza, Director, School of Planning & Arch., New Delhi.
- (v) Dr. O.P. Jain, Consulting Engg., New Delhi (formerly Director, IIT Delhi).
- (vi) Prof. N.M. Swani, Director, IIT Delhi.
- (vii) Dr. Jagdish Narain, Secretary, AIU.

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A book exhibition was also organised on this occasion in Jabalpur from 1st to 3rd March, 1984. Prof. M.S. Gore, Vice-Chancellor, Bombay University, inaugurated the exhibition. In addition to the various publications of the AIU, books published by member universities were also exhibited. This provided an opportunity to the residents of Jabalpur and teachers and students of educational institutions to see the publications of various universities. There was an encouraging response both from students and teachers for subscribing to the UNIVERSITY NEWS, which has become a weekly publication from this year.

The next Annual Meeting of the Association would be held on the campus of North Eastern Hill University, Shillong from 26th to 28th February, 1985. The Diamond Jubilee Session however would be held in Delhi in November/December, 1985. ☐

Why Examination Reforms

A Report of Activities and Recommendations at the end of one-day symposium on "Why Examination Reforms?" held on March 11, 1984 at Amravati University.

A one-day symposium on Why Examination Reforms' got off to an excellent start day an inspiring address from Dr. Thakare, Vice-Chancellor, Panjabrao. Krishi Vidyapeeth, Akola. In his address, he narrated the historical development of introduction of trimester system in agricultural Universities with a view to integrate teaching, learning and evaluation. He however, cautioned the universities other than agricultural, not to commit the mistakes that followed a rather hasty introduction of all reforms at one stroke. He reiterated that several preparatory measures are to be undertaken before successful implementation of reforms, changes and innovations. He underscored the importance of training of teachers. Prof. Natarajan in his keynote address outlined the need for considering basic issues in examination reform, namely, frequency and language examinations, structure and pattern of question papers. choice of questions, paper-setting and types of questions, evaluation of scripts and moderation of results. He mentioned the success and failure stories of several universities and drew their attention to the factors involved in a clear understanding of basic concepts of reforms, mode and modalities of reforms. procedures of reforms with adequate preparation of teachers, students, decision makers and administrators. Such academic issues like introduction of question banking, introduction of grading in place of marking and introduction of scientific procedures for moderation and gracing have all been dealt with in detail. Certain recommendations are given below which were accepted by the group consisting of distinguished members of Executive Council, Academic Council, Boards of Studies and Principals of affiliated colleges. A plan of action is also indicated in this report which will enable the university to put in action these recommendations. These are:

1. A revision of syllabii to include:
   - (a) Content outlined in great detail to indicate breadth and depth of topics: sequence, etc;
   - (b) a list of abilities/skills to be developed in students;
   - (c) a list of teaching techniques to be adopted with teachers activities/student activities;
   - (d) a list of aids to teaching/learning;
   - (e) evaluation procedures and
   - (f) is time scheduling to be undertaken immediately?

2. It was unanimously endorsed that there should be only one annual examination.

3. The most important recommendation is to get the syllabii revised to take care of the aspect of spelling out of instructional objectives.

4. It is recommended that a chart of combining outlines of content/abilities should be prepared for each question paper.

5. It is therefore, suggested that the Boards of Studies meetings may take a decision on the pattern of the question paper. It should be said here that there was a unanimous consensus amongst all groups that the restructured question paper for all subjects should consist of :

   (i) Part A—Objective type 20-40 items, 20-40 mts; 20-40 marks. (ii) Part B - Short answer, 10-15 questions, 40-60 mts; 20-50 marks. (iii) Part C - Long answer, 1-3 questions; 20-60 mts; 15-40 marks.

   The actual decision regarding Part A, Part B and Part C will have to be made by different Boards of Studies.

6. While total elimination of options should be the ultimate goal, it may not be wise to go that far immediately.

7. There was a unanimous recommendation that Grading should be bilingual, namely, Marathi and English.

8. Those who set question papers and those who mark the answer books must be thoroughly familiar with the subject as it is taught in the colleges. That recent teaching experience at the level of the particular paper is an essential qualification.

   A group of 2 to 3 teachers will set the paper.

   Any paper setter or teacher who writes an examination question, should provide also a model answer.

   Centralised evaluation is recommended.

9. All the groups were unanimously of the opinion that question banking must be introduced.

10. All the groups unanimously recommended to have the internal assessment at the post-graduate level, to start with.

11. It is recommended that at the Post-graduate level a system of direct grading be adopted. It is suggested that the University prepares and publishes a booklet, to be distributed to all teachers in the Colleges, giving them essential information on the intended changes in examination. Probably, it will be desirable also to organise training programmes for teachers who have not attended Workshops. One means of speeding the procedures may be to make more use of mechanical equipment like computers.

Plan of Action

1. A joint meeting of Boards of Studies and Academic Council must be organised to consider the Report and accept proposals contained therein. Board of Studies should be asked to restructure their syllabus, restructure the pattern of Question Papers, prepare blueprints.

2. Preliminary meeting of Principals to discuss the mechanics of Examination Reforms Programme.

3. Meeting of Principals of Colleges and Heads of Departments to discuss with a consultant the problems relating to Examination Reform.

4. Orientation Seminars for teachers and students at least 5 or 6 centres.

5. Primary Workshops at the University for selected teachers representing all the disciplines in areas like:

   (a) Internal assessment

   (b) Question Banking

   (c) Grading

6. Seminar of leaders chosen 9 out of Primary Workshop participants to serve as group leaders at Secondary Workshop.

7. Secondary Workshop for a large number of teachers at different regional centres making use of leaders.

8. Meeting of leaders to finalise recommendations.

9. Meeting of student representatives.

   A series of Workshops to train teachers in implementing :

   (a) Internal Assessment

   (b) Question Banking

   (c) Grading

   in the Kanpur University

It is recommended that Examination Reform Unit and a post of Controller of Examinations be created with the following functions.

Examination Reform Unit (Academic: Preconduct/Post Conduct)

1. Form and content of Question paper

2. Paper setting

3. Evaluation of scripts

   Analysis of examination papers, marks (statistical) Training of Teachers/Papersetters/Examiners

Controller of Examinations (Administrative : Conduct/Post-Conduct)

Printing paper, Storage, (Secrecy), Announcement of results. ☐

Decision-Making and University Management

D. R. Darji*
D. K. Sharma**

Decision-making is very important aspect of the management of education systems. Management of the decision-making process is management of the structure and functioning of decision groups so that these decision-making processes become congruent with changes in the nature of the decision-making task undertaken at a particular point of time within the system. A decision-making design is therefore, a very complex problem. The decision process requires that a single strategy must be chosen from a number of alternatives which may begin to structure our thinking process. All relevant elements must be a part of the decision process. So it is desired to determine a decision-making method that will be acceptable to all the parties participating in the decision process. It is one of the most important areas for research specially for education systems. In India, very few researches have been done in the area of decision-making concerning the higher education system. Abroad, there are researches in decision-making in relation to : (i) collective bargaining; (ii) decisional participation; (iii) power and influence of decision-making ; (iv) models of decision-making; (v) use of computers and simulation; (vi) miscellaneous researches. Here brief review of these researches has been given for the researchers and practioners working in different types of education systems.

Collective Bargaining

At present the traditional faculty mechanisms for decision-making are as widely practised as they were before collective bargaining came to the campus. Gains in faculty influence in decision-making are not restricted to a few but are spread among a range of faculty members. The experience of faculty unions thus far does not show that collective bargaining produces such changes in the working conditions of faculty as to make them no longer professional (Jimenez, 1980). Researches done by Thorpe (1975), Ramsay (1979), Hutto (1980), Dunbar (1976) support the favourable attitude of faculty towards collective bargaining. McFadden (1977) examined the perceived effects of collective bargaining on the distribution of power within community college decision-making. Findings of this study suggested that collective bargaining would significantly alter the balance of power within community college decision-making arenas. The contention that collective bargaining would foster the existence and the willingness to share control in decision-making was supported by the data in this study. In some cases locus of decision-making for faculty work-load had shifted from strong administrative domination toward co-equal involvement. Faculty experience with collective bargaining has apparently been instrumental in stimulating sharply increased concern for even more participation in institutional governance (Hudson, 1974). Few researches have been done on the impact of collective bargaining in higher education systems. Bernier (1974), McDonald (1976), Napolitano 1978), Tumminia (1979), Bidwell (1980) have found that collective bargaining has got significant effect on the management of colleges.

Depaoli (1974) determined the difference between working conditions for community college instructors operating with a traditional contract. There was no significant difference between the minimum mean salaries for the two types of colleges. Collective bargaining colleges and traditional colleges demonstrated no significant differences for the following : (a) instructor's working conditions; (b) leave provisions; (c) general contract provisions; (d) promotion regulation. There may be difference of views about collective bargaining between faculty and administrators. The results of the study done by Michaelis (1980) indicated that faculty attitudes towards both bargaining and governance issues differ markedly from the attitudes of administrators and trustees.

Decisional Participation

The individuals differ widely in the importance they assign to their own membership and to the organization itself. More is clearly related to the possibility of increasing participation as a way of developing personal commitment to the organization. Phillips (1974) determined the differences that exist between the actual and desired levels of participation perceived by community college middle management personnel with respect to selected personnel management functions. A highly significant difference was found between the middle managers' perception of their actual and desired levels of participation. In some of the researches, there was specific differences in views expressed pertaining to the existing degree of participation in the decision making among faculty members (Renegar, 1975; Hessenflow, 1975). Research work was also done to examine the relationship between decisional participation and job satisfaction of deans of education (Hauser, 1979). The deans of education were found to be very satisfied with their job. Shelton (1974) identified the perceived faculty administrative governance relationships from clarification of perceived policy relations in the areas of administrative leader-

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ship, decision making, faculty control, and professionalism. Statistical difference supported the contention of faculty and administrator. Administrators were more satisfied with existing policy arrangements in all but a few of the governance issues. Nehr (1975) viewed university governance as a set of political processes, and focusses on entrance of faculty into the committee structure of the University of Minnesota Senate as one of those processes. Akinola (1978) found inadequate involvement of faculty members in all areas of governance decisions. University Senate dealt with major governance decisions in Academic programmes through its various committees. Khalaf (1980) analyzed faculty perceptions of the performance of current institutional governing boards in academic affairs, and the alternative patterns of Faculty participation in governance in Texas Senior Colleges and Universities. It was concluded that respondents have negative perceptions about their boards. Boards faculty relations are expected to deteriorate, and faculty tension to increase, if faculty are not allowed to share in the authority for academic affairs. Dense (1977) identified the difference in perceived extent of bureaucracy between Faculty of unionized and non-unionized institutions of higher education. There was no significant difference between the two groups with respect to perceived extent of bureaucracy. Faculty of non-unionized institutions were significantly more satisfied with their participation in decision-making than faculty of unionized institutions. A highly significant negative correlation was found to exist between perceived extent of bureaucracy and extent of satisfaction with participation in decision-making. Darji and Sharma (1979) identified different decisional situations for a education system and collected the perceptions of the faculty members about their existing and would be participation in future.

Power and Influence on Decision-Making

Rugen (1977) examined and compared the relative amounts of latent power possessed by faculty associations and administrative officers as perceived by faculty members at community colleges in New York State. The faculty association in one institution was perceived to possess the largest amounts of latent power. In other institutions, faculty association possessed a small amount of latent power because they have been unable to gain power through the collective bargaining process, or because faculties have used other means to gain power such as the faculty senate.

Stonewater (1978) conducted a study of perceptions of power and influence in university decision-making. The comparison between faculty and administrators revealed that on several key issues, administrator perceived faculty as having more influence than faculty themselves perceived. Regarding preferred versus perceived influence, there was more difference between the two for faculty than for administrators on virtually all comparisons.

Dykes (1978) examined the factors which influence faculty participation in a complex organization innovation at the University of Wisconsin. It was found that environmental uncertainty and organizational pressure for change as measured by performance served as a primary motivating force for participation. Lyons and Achilles (1976) studied the influence of mood of educational administrators on professional decisions. Results of this study suggest that practising and certified educational administrators were able to view educational tasks professionally and to exclude from their decisions personal "moods to arrive at professional" decision.

Admire (1978) analysed the role of community college division chairman in administrative decision making. It was found that administrative decision making role of chairman was changing as evidenced by more administrative descript titles, more time devoted to administrative duties, collective bargaining and the influence of larger divisional unity. Decision-making was most evident in the budgeting and staffing with limited involvement in planning. Decision-making was affected by such factors as size of college and decisional autonomy.

Erickson (1980) determined the effect of power held by academic departments on decision-making process. The relationship of decision-making process to total departmental power, total faculty power to total student power, and to the distribution of power were examined. Some significant relationships were found.

Floyd (1980) determined the relative importance of selected influences (politics, legal limitations, enrolment factors, economic measures, and administrative values) on the decision-making of departmental/division heads. Legal limitations were perceived as most important in the area of personnel (faculty/staff) services, second in importance in the area of student personnel services, third in importance in the area of administrative and managerial functions and least important in the area of curriculum and instruction.

Models of Decision-Making

Houghten and Gear (1976) examined the revolutionary concept of recurrent education in detail and developed a mathematical programming model. Parks, Siemens and Nicolai (1976) developed a model using cause representation of a decision-making task with a fixed number of alternatives. This model requires only the specifications of relevant input stimuli and a sample of stimuli-response relationship in order to develop a representation of the task. Mintzberg, Raisinghani and Theoret (1976) proposed a general model to describe inter-relationships among 12 elements (3 central phases; 3 sets of supporting routines; and six sets of dynamic factors).

Richard, Taylor and Thomson (1976) developed a five staged model for decision-making which incorporated a faculty opinion survey permitted almost universal expressions of opinion and preference on a complex administrative decision. Perlson (1977) worked for increasing the utilization of systems-based decision-making by college and university administrators. Case studies were suggested to furnish the raw material for the application of the system-based model to problem situation requiring administrative decision-making. Connell (1977) seeked to articulate a specific frame of reference with respect to normative social systems by integrating the concepts of decision-making and change in a way that present a dynamic model for leadership in an educational setting.

Cooper (1977) suggested resource management model which is a single period linear goal programming model. It was proposed that in order to improve performance by the implementation of multi-period models, the systems approach should be used to study the decision process. Chapman (1979) applied Graham Allison's Governmental (Bureaucratic) Political Model of organizational decision-making. This model would be useful for persons at any level of an educational hierarchy for viewing the politics of discovery, the politics of the issues and the politics of choice associated with decision. Dufty and Williams (1979) tested the contingency model of managerial leadership on the basis of decision-making procedures and managerial styles of department head in an academic institution as compared with those reported in other studies of managers in private enterprises and public bureaucracies.

Use of Computers and Simulation

Ferguson (1969) developed and conducted experiment with a time-sharing computer model. By modelling the dynamics of a job shop, the authors were able to both, make use of and evaluate academic research in job shop scheduling. The authors have devised a specific appointment of the problem environment which permits uses of their information system to explore the effects of various combinations of heuristics and programmed decision rules. The response of over 300 managers and academicians who have participated in the experiment, provides evidence of the practicality of such an approach to multi-dimensional time variant problem solving.

Inbar (1976) analyzed the research and theory on simulations of bureaucratic decisions and the information processing limitations of human decision makers. Several traditional criticisms of simulation efforts in bureaucratic decision-making have been discussed. Hart and Sung (1976) used computer simulation of triad decision making which examined four system variables that may affect the group members' satisfaction with the group decision and the groups difficulty in reaching the decision. The variables were : (1) the decision rule used; (2) the relative similarity of the individual members initial preferences position to the group decision; (3) the initial concordance of the group members preferences; (4) the group members preference strength. Ego involvement from Sherif's social judgement theory of attitudes, was found to be a plausible process through which individual preferences can influence group decision. The results of the computer simulation were compared to the results from an experimental simulation of triad decision-making obtained by Sung and Castore. Differences and similarities in the two results and their implications for understanding group decision-making were discussed and explained.

Hoban (1978) identified the decision-making styles of student personnel administrators in higher education through use of an inbasket simulation. These decision-making styles as indicated by the result of this study, revealed three major indicators of behaviour. First, as a group, those student personnel administrators tended to concentrate their decision-making power within the dean of students office without much staff consultation. Second the subjects in this sample involved themselves little with other members of the college community. Third, they displayed very few instances of informalities when dealing with their staff.

Miscellaneous Researches in Decision Making

Johnson (1973) identified the decision-making characteristics of administrators in predominantly black institution of higher education. The Presidents, Academic Deans and Department Chairmen viewed in many ways the role and functions of their office. The majority of the responses given by the respondent was in area of involving more people in decision-making process. The Department Chairmen and Deans stressed planning and co-ordinating the programmes of the departments. The President placed more emphasis in the area pertaining to the finances of college.

Anderson (1974) identified and described methods of measuring value within the normative framework of decision theory and to discuss the feasibility of potential application to higher education. It was concluded that decision-making process in higher education would necessarily require probability judgements and value assessments. A value decision approach would not replace subjective judgement and experiences nor do quantitative decision rule replace the human decision maker.

Sharples (1975) attempted to give caution against the indiscriminate use of economic analysis by examining some of its conceptual limitations, the usefulness of the techniques and the implications it has for particular aspects of an organization. Economic analysis should be applied but it may consider other values which would be pursuing long term efficiency.

Pederson (1975) examined the matter illustrating the desirability of greater involvement in the making of educational decisions: the decentralization of curriculum development, the collegial approach to making decisions and the professional development needs of teachers and administrators. It suggested more careful planning, decentralization and greater involvement in educational decision-making, pre-service and in-service of involved personnel and adequate time and resources should be presented and co-ordinated for rational decision-making.

Boehm (1976) suggested the judgement of the executive or of the computer point out should not dominate in the decision-making process of the organization. He advocated for the combination of the two on the basis of principles of systems analysis based on nine principal methods of systems analysis, two econometric models and system dynamics. In order to develop new methods for improving decision-making and information systems it is necessary to understand how these systems currently operate. Carl (1976) reported some aspects of current administrative systems. Khoddami (1977) studied the student involvement in decision-making process. Results showed that students were not able to undertake activities related to their needs and interests. There was lack of opportunities for student participation in the governance of the college where students can make valuable contribution. Most significant finding was that neither students, faculty, nor administrators were satisfied with the current situation. Srivastava (1977) found that most of the teacher and student respondents as a group could not entertain any reason against permitting teachers to participate in the administrative decision-making and functioning of their Institution.

Lynch (1978) conducted a study to improve decisions made by administrators. The purpose of the study was to determine, by experimentation, whether the anxiety level of the subjects who practised transcendental meditation could be reduced to a significant degree so that they could make better decisions under an externally imposed stress condition. The experimental group was taught transcendental meditation and practised the technique for two months. It was found that transcendental meditation was beneficial in helping the subjects to reduce their level of anxiety, enabling them to make better decisions.

Chapman (1978) conducted an empirical study of college choice decision making behaviour. The study results suggested that the two most important factors in the college choice process were college quality and financial aid. Apparently, students were quite rational in their college choice behaviour.

In a study Matthai, Pareek and Rao (1978) found out that the higher the dissatisfaction due to under participation, the less the organizational health of the education system. Darji and Sharma (1980) collected the opinions of faculty members of a University to study the students and non-teaching staff participation in Governance.

Beasley (1980) assessed perceived outcomes of participants in the faculty development programme in historically black public colleges and universities during academic years from 1968 to through 1973. It was concluded that faculty development was beneficial to both participants and institutions; that, in the main, participants achieved important outcomes. The extent of agreement between participants and co-ordinators with regard to those items of inquiry support these conclusions.

Future Researches

Viewing the researches done in decision-making it could be concluded that it requires more and more research attempts to provide better solutions for our education systems which will be creating significant impact on the management and in due course of time accountability aspect will be justified. Following are some of the suggested areas for future researches in this aspect :

1. Perceptions of faculty members about student participation and non-teaching staff participation in decision-Making.
2. Laymen's participation in University Governance—attitude of faculty and administrators.
3. Development of participative models in decision-making.
4. Use of computers in different type of decision situations in various types of education systems.
5. Application of mathematical model of decision-making.
6. Effect of decisional satisfaction on different factors like, job satisfaction, organizational health, conflict management, teachers' morale.
7. Identification of different decision situations and deciding level of participation for various education systems.
8. Possibility of collective bargaining in policy decision.
9. Decision analysis of various decision-making bodies for certain period and their impact on organizational effectiveness.
10. Problems faced by the administrators in different decision situations.
11. Bureaucratic set up and its impact on decision-making.
12. Impact of pressure groups on different decisions in some education systems.
13. Development of proper simulation exercises for developing decision-making ability.
14. Impact of policy decision on routine decision-making.
15. Psychological and sociological factors related to decision-making like personality, intelligence, creativity, group dynamics, social set up, social change, etc.

[*Note: A bibliography of references submitted by the authors is not printed.*]

Shri Venkatraman Addresses Convocation of Anna University

Excerpts from the Convocation Address delivered by Thiru R. Venkatraman, Union Minister for Defence, at the Anna University, Madras on 26th February, 1984.

Convocation

"... We are living in an exciting period in the history of mankind and in the history of our own country. Science and technology have made phenomenal progress in our times. For the first time in the world history, we have the great opportunity to eradicate misery and poverty through the application of science and technology and to establish a universal brotherhood in which prosperity is equitably shared by one and all. In our own country, we are passing through a phase of rapid transformation from a traditional to a modern and vibrant society, within the framework of a democratic and secular political system. To all of us, and more particular to the younger generation, has been given the unique opportunity of participating in this great adventure.

"The success in taking a leap forward in the march towards an egalitarian and prosperous society, which was the fond dream of those who struggled valiantly for the independence of this country, will turn largely on the pace of advancement in the field of science and technology. It is to the eternal credit and foresight of Pandit Jawaharlal Nehru, more than anyone else, that he realised the tremendous contribution which science and technology could make to the socio-economic transformation of our country. He was steadfast in his belief that the problems of poverty and unemployment could be met only through the application of science and technology in various facets of our economic life. He laid the foundation of many of the great institutions, the national Scientific Laboratories and gigantic Power and Steel projects of which we are very proud today and provided continuous support and encouragement to an unprecedented expansion of educational and research activities. The large infrastructure which has been created and nurtured during the post-independence period has now bestowed a unique position to this country as having the third largest compliment of scientific and technical personnel in the world. Above all, Nehruji considered that the pursuit of science will help to engender the scientific temper—an attitude of mind which eschews dogmas and rituals and imparts the ability to reason out and to instil a spirit of enquiry. In his way of thinking, science and technology was, therefore, not merely an instrument of economic advancement but was a powerful tool for bringing about social changes.

"During the last thirty years or so, we have made considerable economic progress and have also created a large infrastructure in science and technology. Great as these achievements are, the time is opportune to take stock of the current situation, to analyse the national and international environment and to give a new direction to our future effort.

"The benefits already achieved through the application of science and technology in agriculture and industry are substantial. The outstanding work carried out in the agricultural universities has significantly contributed to the Green Revolution and the attainment of self-sufficiency in food. In many other agricultural commodities like cotton and jute, the progress, by any standards, is remarkable. I am confident that the continuing research in pulses and oilseeds will soon enable us to break the stagnation in these two essential commodities too. In the industrial sector, we have now a diversified industrial structure which spans a whole range of consumer, producer and capital-goods industries. The tremendous strides made in industrial development is exemplified by the changes in the pattern of our international trade. Unlike in the early days, imports are now primarily limited to basic raw materials like non-ferrous metals, sulphur etc. Manufactured products form only a small proportion of the import bill. At the other end, exports now consist substantially of manufactured products of various kinds including a variety of machinery and engineering goods.

"Apart from the substantial increase in the range of industrial products, this period has also witnessed the development of technological capabilities and competence of a high order. Highly sophisticated technologies, though initially imported, have now been absorbed and often adapted to meet the local needs. There are also some outstanding examples of productionisation of technologies developed within the country. In other fields of activities like medicine, the progress has been exceedingly satisfactory as is evident from the significant increase in the average expectation of life and the eradication of some of the virulent diseases like smallpox.

"A similar effort in competence building within the defence sector has produced equally rewarding results. There has been a considerable step up in the range and quantum of output from defence establishments and associated undertakings in meeting the sophisticated requirements of the defence forces. More importantly, the Defence Research and Development Organisation (DRDO) has to its credit, considerable success in the development of advance technologies which should go a long way in achieving a greater degree of self-reliance.

"It will, however, be unwise on our part to ignore some of the weaknesses that have crept in. While the record of domestic industry in general has been good in the absorption and adaptation of imported technology, there has been little effort, barring some honourable exceptions, to upgrade technology to remain contemporary with international developments. The result has been a creeping obsolescence over a wide range of the industrial spectrum, leading to the emergence of a high cost economy. Productivity, on the whole, remains low and consequently, domestic industry is unable, in most cases, to face international competition. It has not been possible to build up appropriate institutional mechanism to provide the necessary linkage between universities, scientific and technological institutions and the industry. While a large infrastructure has been created, for scientific and technological research, the results of the painstaking work in our universities and laboratories remain largely dormant without finding application in the production of goods or services. As a consequence, there has been a continuing dependence on imported technology, including repetitive imports even by industrial units which had the advantage of imported technology for many years. This phenomenon has also led to a sense of dissatisfaction among our research scientists and technologists who feel frustrated that the results of research are not accepted and utilised by industry. Industry has done little by way of promoting in-house research and development activities. Above all, universities are virtually kept out of the stream of the main socio-economic activities of the nation.

"These unsatisfactory trends need to be arrested. The size and traditions of our nation demand of us to be highly self-reliant to maintain our independence and to ensure a more rapid economic advancement. We have always upheld self-reliance as one of our premier objectives. Excessive reliance on external resources, whether financial or technological, will be inconsistant with this cardinal objective. The recent international developments only highlight the need and impart a greater sense of urgency to achieving self-reliance as early as possible. The liberal approach which informed international relations in the past and contributed to a significant flow of finance and technology to the developing countries has unhappily undergone a marked shift in favour of protectionism and dwindling transfer of resources to the developing countries. The quantum of multi-lateral and bilateral assistance has steadily diminished in real terms in recent years. Many restrictions have now been placed on the flow of technology. To worsen the situation further, the global security environment has also visible and steadily deteriorated.

"It is in this background that we have to give a new orientation to our scientific and technological effort. Both in the matter of economic development and defence, it is only through the application of science and technology that we can find solutions to the problems that beset us. Notwithstanding the fact that savings in the economy are well over 20 per cent, comparable to those in the developed countries, the rate of economic progress is still substantially below the needs and aspirations of our population. The significant increase in the capital output ratio over time is, among other things, indicative of poor productivity and efficiency in the economic system. One of the contributory factors to this unfortuante situation is the lack of technological progress in the major sectors of our economy. While in the short term, technology can be imported, to the extent it is still available without restrictions, we will never be able to catch up with the rapid advances elsewhere in the world unless we are in the forefront of technology generation. Apart from the fact that the latest technology is often not available for transfer, imported technology may not often be the most appropriate one in relation to our factor endowments. Capital intensive technologies, for example, will be irrelevant to a country like ours in which capital is scarce and labour is abundant. Even when technology is imported, it is necessary that it is carefully scrutinised from the point of view of its relevance to domestic conditions. In most cases, it may need to be adapted to meet local needs. In other cases, there may be no option but to develop the technology within the country, as for instance, for the utilisation of some of the unique natural resources, which we possess. As these are of no importance to other countries, technology for their utilisation obviously cannot be expected to be developed by them. It follows that both the national imperatives and international outlook point to the need to become technologically self-reliant at least in some of the crucial sectors of our economy.

"When it comes to defence, the imperatives of becoming self-reliant are more critical. Mere acquisition of sophisticated weaponary from abroad does not bestow the required strength and security to our country. As in the civilian sector and more so in the defence sector, the latest technology will not be parted with by the owner, and therefore, as long as we depend on external sources, our competence will continue to remain second rate. The reason for this emphasis on indigenous development is not only an economy one. It is not merely that a developing nation can ill afford to pay the price in foreign currency. The more fundamental reason is that within the realities of international politics, there is no other way of assuring for ourselves the uninterrupted availability of critical items like guns, tanks, radars, torpedoes, missiles and aircraft in times of real need-except through indigenous design, development and manufacture. Besides, there is a grave risk of the country being deprived of essential spares and replacements during periods of crisis.

"These considerations are reflected in the Technolgoy Policy Statement announced by the Prime Minister in January 1983. The central theme of this Statement is technological self-reliance. As pointed out in that Statement' it is not that we intend to deny ourselves the benefits of imported technology, but each time import of technology is resorted to, it will be judged in the context of national interest. It is necessary to lay down clear yardsticks to assess the nature and relevance of the imported technology and the terms on which it is imported to satisfy the criterion of national interest. It should certainly not hurt the domestic effort in building technological competence which, as mentioned, is the primary aim of the Technology Policy.

"Fortunately, we are endowed with an adequate measure of outstanding talent which can take us rapidly towards the objective of achieving self-reliance in critical areas of technology. The scientists and technologists working in our national laboratories, defence research institutions, universities and in industry are of a calibre which compares very favourably with international standards. We have also some very eminent scientists and technologists working outside the country, whose services can be availed of in the national interest. The basic requirement of intellect and talent for attaining self-reliance, therefore, exists. All that is required is to provide clearcut objectives and the organisational support for the teamwork to produce technological breakthrough in carefully chosen areas of national importance. Our scientists and technologists have exhibited their capacity to produce outstanding results. The brilliant achievements in the field of atomic energy, space and oceanography are striking examples of what Indian scientists and technologists can do. India can realistically expect to become one among the technologically advanced nations within the next decade or so. It is to this end that we should now bend our energies in the current stage of our economic development.

"We are on the verge of breaking into a new range of high technologies with immense potential for the benefit of humanity. The beginnings of this new technological revolution have already been with us, but it is difficult yet to fathom the full scope and range of these technologies. There have been rapid advances in the field of electronics — a relatively new technology—with the prospect of further revolutionary changes. There is no aspect of life which is not today touched by electronics. The virtual explosion in the field of communications would hardly have been possible but for the advent of electronics. It is needless to emphasise the crucial role played by electronics in the field of defence. It is contributing to an unprecedented transformation in the whole range of manufacturing practices and technology, ranging from design, production, control, testing to quality assurance. The entry of robots has imparted a new element of great significance with wide social and economic consequences. Information technology supported by electronics is now registering an unprecedented growth. Whether it be production or entertainment, communication or information, defence or medicine, electronics has left its indelible mark on them. Similarly, genetics and bio-technology will herald many developments of immense consequence in agriculture, medicine and industry. The technological developments in harnessing new sources of energy will soon provide a greater sense of assurance against the depleting traditional resources of energy. Laser technology is another area with great potential in a variety of fields including industry and medicine. The advances in oceanography and particularly in the exploitation of marine non-biological resources also stand out as one of the new technologies of great economic and strategic significance. It is important that we are aware of these remarkable advances and keep ourselves in the vanguard of these technologies through our own efforts.

"The world is currently going through a second technological revolution. While the earlier industrial revolution helped substitute physical power by mechanical power, the current electronic revolution seeks to substitute brain power by electronic memories and computer applications. India missed the industrial revolution since, we were not in control of our destinies at that time but we can neither afford nor have any excuse to miss the Electronic Revolution, that is overtaking the world today. Posterity will not forgive us if our scientists and technologists do not participate in this great adventure and carve out for India an honourable place in this technological explosion..." □

New Study Centres at Madras University

The Institute of Correspondence Education of the Madras University on 19th January 1984 launched upon their two programmes (i) Inauguration of Students' Study Centres' and (ii) Inauguration of New Post-graduate Courses in M.A. Public Administration, Political Science and M.Sc., Chemistry and Zoology. Dr. John S. Daniel, President of the International Council for Distance Education and Vice-Rector (Academic), Concordia University, Canada, inaugurated the programmes and delivered the key-note address. Dr. P.M. Annamalai, Director of the Institute outlined the various measures taken to maintain parity of standards between the correspondence and regular courses so as to dispel any misgivings about the credibility of the correspondence courses.

While delivering the Presidential address Dr. M. Santappa, Vice-Chancellor of the University stated that this Institute was started only to meet the growing demands for higher education. This nascent Institute did have its teething problems, said Dr. Santappa and requested the President of the International Council for Distance Education to help the Institute to develop the necessary infrastructural facilities especially the effective use of media in Distance learning or the educational technology for this non-formal system of education. Further the Vice-Chancellor pointed out the necessity to strengthen the link between the University Departments and the Institute and the need to wipe-out the stigma attached to the degrees awarded by the Correspondence Institutes. Dr. Santappa expressed the hope that the three study centres in the city of Madras, the World University Service Centre, the A. C. College and the Pachiappas College established for the students of the I. C. E. would be forerunners for more such centres enabling the students to avail themselves of the facilities offered there.

Dr. John Daniel's key-note address high lighted the global perspectives of Distance Education. According to him the dimensions of this dynamic system are so great that it is poised for a take-off all over the world; 50 countries have 80 affiliated units of Distance education, the Central China Television University in Beijing with an enrolment of 750,000 being the largest among them, the next in the order is the Open University of Thailand with 200,000 students, followed by Korea with 120,000 students; in all about 10 million students are studying in this system all over the world.

Dr. Daniel revealed another interesting aspect of this system. He narrated the experience of Australia, England and Thailand which conducted a survey, the result of which established the fact that 'off-campus' students fared better than their counterparts 'on-campus'. He further commented that a short coming of Correspondence Education in India was that it concentrated mainly on arts, social sciences and commerce whereas elsewhere in the world even the disciplines in science and technology were taught through this system. He added that a two-way communication system should be evolved in order to impart education through courses on Science and Techonology. Dr. Daniel mentioned that a network for the 'Pacific Region' was being created in Malaysia for the study of the above subjects.

Dr. Daniel advocated the development of independent open-universities on the model of the British Open University as he feared that under the conventional set-up a colonial-status would be given to the Correspondence Institutes.

Dr. Daniel further said that the primary requisite for the success of distance-learning was an effective two-way communication system to ensure the necessary feed-back thus making the students feel a part of a system. He said that an international data Bank is being established with the help of the United Nations University to provide computerised information on all distance education courses throughout the world.

On the Study Centre programme now launched upon by the I.C.E., Dr. Daniel said that this fulfilled the needs of the major participants in the system of Distance learning. This promoted interaction not only with the Faculties but also amongst the students themselves, thus eliminating the loneliness attributed to the students in this system.

Seminar on Business Management and Punjabi

The protective capital licensing policy was retarding national pursuits in manufacture of indigenous automobiles in our country, remarked Dr S.S. Johl, Vice-Chancellor, Punjabi University at a seminar on "Business Management and Punjabi" organized by the Department of Business Management in collaboration with the Department of Planning & Development at the University recently.

The Vice-Chancellor stressed to promote research and professional scientific cult for improving the level of efficiency in the agricultural and industrial sectors.

Dr Johl urged the Department of Business Management at the University to render common consultancy service to the small scale industries. As a result of interaction, this will provide the business management students with worthwhile data for research.

Earlier, commending the strong fabric in the society which were helpful in repulsing the persisting attacks upon it, the Vice-Chancellor, appealed to the scholars to contribute their lot in rejuvenating the society to face present day challenges from irresponsible quarters.

Mr Amarjit Singh Dhillon, Director, Planning and Development, pleaded the teachers to use Punjabi for transferring knowledge to the students.

Prof P.K. Kapoor, Head of the Department of Business Management, Punjabi University, in his welcome address reminded the delegates of the statutory obligations of the University for the development of the Punjabi language.

250 technical terms coined in Hindi

Nearly 250 technical terms were coined after detailed discussions held during the four-day seminar on coordination of scientific and technical terminology in Hindi which concluded at the Gorakhpur University on February 4, 1984.

About 20 experts of various disciplines from Gorakhpur University and outside participated in the seminar which was sponsored by the Commission on Scientific and Technical Terms (CSTT).

About 3000 terms pertaining to different disciplines have so far been coordinated through seminars and meetings held in different Universities.

The CSTT has been reconstituted under the chairmanship of Dr. Malik Mohammad. It will now function as an apex body in the field of scientific and technical terminology.

The Commission will, in future, sponsor and extend financial aid to the extent possible for the evolution of terminology and preparations of technical dictionaries in languages other than Hindi.

The task of preparation and evolution of scientific and technical terminology in Hindi was initially taken up by the Ministry of Education and the equivalents were finalized by different committees of experts in various fields of science and technology.

Later, in pursuance of the Presidential Order of April 1960, the Ministry of Education appointed a Standing Committee for Scientific and Technical Terminology to review the work done and also to evolve advanced terminology in various disciplines.

The Commission for Scientific and Technical Terminology has so far published Hindi equivalents of about four lakh scientific and technical terms pertaining to almost all the disciplines like medicine, engineering, agriculture, social sciences and humanities in the form of various consolidated glossaries.

The terminology evolved by the Commission has been in wide use by the University teachers, writers and students.

However, after having been in usage for more than a decade it is now being felt that a number of terms published by the Commission require inter-disciplinary coordination in order to reduce as far as possible the multiplicity of equivalents of the same or similar concepts.

Besides, the Commission has launched a project of identifying and evolving pan-Indian words for basic scientific and technical terms with a view to preparing as far as possible a uniform scientific terminology for all modern Indian Languages.

International women's day at BITS

Under the auspices of Community Welfare Unit, the 77th International Women's Day was celebrated at BITS, Pilani on 8 March, 1984. The function was presided over by a panel of five ladies, who have made a significant contribution to social welfare, cultural advancement and educational progress in and around Pilani. The highlight of the programme was the presentation of citations given to Mrs. Kaushilya Devi Vyas and Kumari Vinita Sud. The former, a mother of three children, is a successful entrepreneur and the latter, an extremely talented student of Computer Science at BITS, is also successful actress and director of plays. The programme also included a talk on the role of women, world peace, national integrity, by Mrs. Meera Banerji and recitation of poems, dances and songs On behalf of the panel, Dr. (Mrs.) G. Subhalakshmi, Principal, Mandelia Home Science College, Pilani congratulated the organisers for drawing attention towards the need for improvement in the status of women. She suggested that the women enthusiasts could adopt a village or a locality and make a drive to eradicate malnutrition among children as a concrete step of their further involvement in social welfare and rural upliftment.

Sarvodaya fortnight at GRI

As part of the extension programme, the Gandhigram Rural Institute (Deemed University) has conducted a Sarvodaya Fortnight in its service villages. The programme is aimed at strengthening grass-root planning besides creating an awareness among the villagers to come forward to plan for themselves.

The two-week programme in which M. Phil. students and the faculty members of the Institute actively participated, helped the Village Planning Committees to formulate the annual plans. The quadrangular conference comprising development officials, bank managers, members of the Village Planning Committees and the faculty members convened on 12th February, reviewed the last year's annual plans of the villages, recorded the problems and bottlenecks in their execution and formulated the annual plans for the villages for 1984-85. The meeting also suggested ways and means to solve the practical difficulties that crop up at grass-root level in planning and implementation.

Presiding over the joint-meeting, Dr. M. Aram, Vice-Chancellor stressed the need for a systematic and scientific planning at the village level. Commending the example set by Kannimanuthu village in adopting family welfare programme effectively, he suggested that zero population growth and poverty, zero unemployment and zero illiteracy for all the service villages should be the aim. Prof. R. Subramanian welcomed the gathering and Shri N. Markandan, Coordinator of Extension Activities introduced the draft-annual plans.

Repair of the roads, laying of of new roads connecting small hamlets, digging up new ponds including desilting, free medical services were some of the items of work to be taken up in the service villages with the active cooperation of the development officials. Draft annual plans of twenty one service villages were finalised at the joint meeting.

The Gandhigram Rural Institute has a service area of twenty six villages spread over four blocks of Madurai District. Adult Education, pre-school education, rural housing, health education, generating employment opportunities, improving the living conditions of the weaker sections by providing subsidiary occupation are some of the on-going extension activities. A cluster of twenty one villages have been identified for intensive development. Besides Teaching and Research, Extension forms an integral part of all academic programmes offered at Gandhigram Rural Institute.

Course on computer aided design of mine ventilation systems

An Executive Development Programme on 'Computer Aided Design of Mine Ventilation Systems' was organised at the Indian School of Mines, Dhanbad recently. The objective of the course was to cover the subject of computer applications in Mine Ventilation Planning and specially the subject of ventilation network analysis with the help of digital computer.

A total of 15 participants from seven organisations, namely, CEMPDIL, WCL, ECL, SCCL, TISCO, DGMS and CMRS attended the course. The faculty for the course also included, Prof. A.K. Sinha, Associated Professor of Mining Engineering, Southern Illinois University, Carbondale, USA and Shri P.V. Pawar, Manager (MS) of Projects and Developments (I) Ltd., Sindri.

Inaugurating the course, Prof. G.S. Marwaha, Director, Indian School of Mines mentioned the important role of mine ventilation in promoting mine safety and efficiency. He also mentioned that Indian School of Mines will soon be equipped with a large modern computer of the 'VAX' type.

The course commenced with an over-view of the ventilation systems in USA and other countries. The procedure of ventilation planning, net-work analysis by manual as well as by computer method, case studies on computer application in ventilation planning along with the limitations in computer use and design of auxiliary ventilation systems were discussed in the course. A visit was made to the Computer Centre of Projects and Developments (I) Ltd. at Sindri for carrying out exercises connected with the course topic.

The valedictory address of the course was given by Mr. Justice C.T. Dighey, Retired Judge of Bombay High Court and presently holding the Hurriladih Court of Inquiry at Dhanbad. In his address, Justice Dighey expressed the hope that by the use of modern tools like computers Indian engineers would be able to achieve success in the industrial field in the same way as the country had achieved success in the field of art and culture.

Punjabi University to introduce new courses

The Punjabi University Syndicate, which met under the chairmanship of Vice-Chancellor, Dr S.S. Johl on Febuary 25 approved to start the master courses in Journalism and Mass Communication and Psychology at the campus. It also decided to close the honours school courses, except Punjabi. The closure of Evening Institute of Postgraduate studies was also approved.

In one of its decisions, the Syndicate approved of ending the system of moderation in all classes. It also approved to award a "detailed transcript", which will include the theory, practical and internal assessment marks attained by a candidate separately instead of a detailed marks certificate.

The Syndicate also approved to bifurcate the department of mathematics on the university campus into mathematics and statistics.

The Syndicate also approved more than 25 appointments and departmental promotions under the merit promotion scheme.

The Syndicate strongly condemned the incidents of killings and violence in Punjab and Haryana and observed a two-minute silence to mourn the death of those killed in the clashes. It appealed for exercising restraint by the people belonging to all communities and maintain communal harmony.

Calcutta University introduces M.A. in Russian

From the next academic session in 1984, M.A. Course in Russian will be introduced by Calcutta University. Those who have

Shri N. Narotham Reddy Passes Away

Osmania University Teachers at a condolence meeting paid rich tributes to Mr. N. Narotham Reddy, former Vice-Chancellor of the University who passed away on March 12. Prof. G.M. Reddy, Principal, Univ. College of Science, Prof. K. S. Upadhayay, Principal, Univ. College of Arts, recalled the long association of Mr. N. Narotham Reddy with the University and his positive contribution.

A large number of buildings were constructed during his tenure on the campus and at Warangal. He was also responsible for introducing the entrance examination at Osmania University. They described him as a thorough gentle-man and able administrator.

In a condolence resolution, the University teachers recalled with gratitude his services to the University as a member of the University Syndicate and as the Vice-Chancellor. They conveyed their condolences to the members of the bereaved family.

The meeting was chaired by the Vice-Chancellor, Mr. Syed Hashim Ali.

passed the one-year Certificate Course in Russian, now being run by the University, will be eligible for admission to the new postgraduate degree class.

In terms of an agreement entered into between Puskin Institute of Moscow and the Calcutta University three nominees of the Institute from Moscow will be associated with the University as teachers in Russian language and literature. The agreement also provides for exchange of books, journals, other reading material and audio-visual equipment needed for the purpose. At a later stage, research scholars and teachers of the department of Calcutta University would be able to visit Soviet Union for higher studies.

ATKT system being changed by Bombay Varsity

Students of Bombay University who fail in one or two papers will now be enabled to take the supplementary examination within about a month of the declaration of results. This means they need not wait till October/November to clear the papers in which they failed in the April/May (Main) Examinations. This new system has been introduced this year by the University.

This system would be applicable to students of the First year of the Three-year Degree Course examination which will now be conducted by the colleges. Next year examinations for the Second year of the Three-year Degree Course will also be delegated to the colleges and the new pattern of supplementary examination will become available to the Second year students also.

The ATKT (Allowed to keep terms) system will be phased out in this manner.

UGC team visits Gurukula University

On the 9th and 10th March 1984 a Development Team of U.G.C. with Dr. R.R. Mukherji, Vice-Chancellor, Burdwan University, as Chairman visited Gurukula Kangri University.

The committee had meetings with the teachers, students and non-teaching staff. It visited Punya Bhumi, the old site of Gurukula University and the Kanya Gurukula, Dehradun. It is to be noted that the Development team of U.G.C. had come long back during the Fourth Plan period. It could not come during the Fifth Plan period as the conditions in the University were not stable.

The committee, it is reported, insisted that this University must maintain the glorious tradition of Gurukula and should strive to become the foremost centre of learning for Indological studies.

CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/Seminar/Symposium/Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks
April 1-3, 1984	XVIII Annual Conference of the Indian Association for American Studies	—	To be held at Gurukula Kangri University, Hardwar	Mr. S.S. Bhagat, Reader & Head of the Department of English, Gurukula Kangri University, Hardwar.	—
May 23 to June 12, 1984	Workshop	Recent development in Statistics	Department of Statistics, Karnatak University, Dharwad	Dr. B.R. Bhat, Head of the Department of Statistics.	For College teachers
May 1-21, 1984	Refresher Course	Modern Scientific method teaching in Kannada for affiliated college teachers	Institute of Kannada Studies, Karnatak University, Dharwad.	Dr. M.M. Kalburgi, Head of the Department of Kannada.	—
May/June, 1984	Refresher Course	Latest development in functional areas of commerce	Department of Commerce, Karnatak University, Dharwad	Dr. K.R. Mallikarjunappa, Head of the Department of Commerce.	—

News from Agril. Varsities

HAU Kisan Mela

The two-day Annual Kisan Mela of Haryana Agricultural University (HAU) was organised recently. About 7,000 farmers from Haryana and its adjoining States visited the mela. On this occasion seeds of various crops and vegetables of more than Rs. one lac were sold.

The main attraction of the Kisan Mela this year was the Gaurav variety of gram—a newly developed blight tolerant variety having a yield potential of 20 per cent higher than the existing varieties. The performance of the variety has been outstanding not only in the state but also at the national level. It evoked a wide popular response among the farmers, particularly due to its high degree of disease tolerance.

Another attraction of the mela was the release of new varieties of wheat WH-283 and WH-291. Wheat variety 283 has been found very promising under timely sown conditions against popular variety HD-2009 by a margin of 11% whereas WH-291 has also excelled in yield under late sown conditions against variety HD-1553 (Sonalika) by a margin of about 10%. Both these varietes have an attractive grain having a good chapati quality and are highly resistant to the disease.

The farmers were taken on guided tours to different stalls by scientists where they showed much interest in raya RH-30 variety of mustard. The university has also taken lead in release of raya RH-30 promising short duration variety of mustard. This variety has been widely adopted by the farmers in the state. The farmers took keen interest in the stall where the sample of sugarcane variety COH-2 and COH-3 and COS-767 were shown to them.

In the agricultural practices the farmers were shown the cross sowing of wheat which has been found to be a sound practice especially under late sown conditions. It has been possible to raise a very good crop of mustard and gram by adopting dry land technology. In the afternoon of both days a a question-answer session was organised in which farmers got solution of their agricultural problems.

According to Dr. D.S. Bhatti, Director of Extension Education, HAU, this year, for the first time the farmers were shown successful research work undertaken on farm forestry. The technology of raising fast growing species like safeda, poplar and subabool were shown to the farmers. He said that the research work on farm forestry is intended to meet the requirements of fuel supply to the rural people and the replacement of cowdung, small timber and fodder supply, protection of agricultural fields against high wind velocity and to generate additional source of income apart from climatic amelioration.

In the orchards fruit growers where shown the technology for obtaining profuse fruiting in ber crop.

An agro-industries exhibition was also arranged, on this occasion. HAU literature worth Rs. 7000/- were sold. A crop competition was organised on this occasion in which many farmers brought samples of their crops. A total of 30 farmers got prizes for excellent crops grown in their fields. Mrs. Indira Bisnoi, Member of Board of Management, HAU gave away prizes to the winner of farmers.

Earlier the mela was inaugurated by Shri L.D. Kataria, IAS, Vice-Chancellor, HAU. On this occasion a cultural programme was staged for the first time by AIR, Rohtak on the inaugural day.

Ginned cotton seed for sowing

Dr. M. S. Kairon, Head of the Department of Agronomy, Haryana Agricultural University (HAU), has suggested chemical deliting of Ginned Cotton seed before sowing. According to the technique 10 kg. fuzzy cotton seed is put into a drum of acid deliting machine or large plastic tub and 1 litre of sulphuric acid (commercial grade) is added and stirred for 6 to 12 minutes (depending upon the quantity of fuzzy on seed) till fuzz on the seeds gets burnt. The seed is then washed 3-4 times with clean water and light seeds floating on the surface are removed. Only healthy heavy settled seeds in drum or plastic tub are used. The seeds are then washed with 2% lime water and again with clean water. The seed is then dried in sun for 4-6 hours.

There are many benefits of this technique as healthy and clean seed is obtained, immature, half rippened and diseased seed is remeved, pink boll worm larva present in the seed is killed by acid burning, better germination is obtained, less seed rate per unit area is required.

News from Abroad

Battery acid used in fodder

Australian biochemists have found an inexpensive way of making straw more digestible for cattle, sheep and other animals by moistening it with car battery acid.

Professor Geoff Richards, of the James Cook University of North Queensland's Department of Chemistry and Biochemistry, said the treatment would have particular application in Asian countries where the potential value of straw as fodder had long been recognised. Farmers on small holdings could look forward to significant savings, he said.

Small quantities of sulphuric acid were poured on to the straw or bagasse, which was then left to dry and age for a few weeks. It could then be fed to cattle, sheep and other ruminants.

Expensive and relatively large amounts of alkaline substances, such as sodium hydroxide and ammonia, are currently used to make straw and other fibrous material edible. Without some treatment the important ingredient in straw, cellulose, is mostly inaccessible to the grazing animal's digestive processes.

The sulphuric acid which Professor Richards finds most suitable is about the same strength as that used in car batteries. Other acids also work, but sulphuric acid was chosen because it is readily available in most farming communities.

[*Courtesy*: Australian Information Service Science Newsletter]

Sports News

Summer Coaching Camp Programme Gets Momentum

With a view to provide specialised training to the University Sports talent, AIU has introduced a new scheme of University Level Coaching Camps. Under the new scheme specialised training is imparted during the sumer vacation to the outstanding University sportsmen/women in ten selected sports disciplines. The sports disciplines are: (i) Athletics (M&W), (ii) Badminton (M&W), (iii) Basketball (M), (iv) Basketball (W), (v) Football (vi) Hockey (M), (vii) Hocky (W), (viii) Volleyball (M), (ix) Volleyball (W), (x) Wrestling. Summer vacation has been chosen, in particular, because this is a period when the university sports cream tends to slack. These camps are organised to keep them trim and in shape during this critical period of their studentship so that they are able to take up sports training seriously when the university reopens for the new academic session. During the coming summer AIU has allotted University Level Coaching Camps to the universities mentioned below under each discipline:

1. Athletics (Men & Women)

Delhi University
Gandhiji University
Gujarat University
Guru Nanak Dev University
Kerala University
Osmania Uiversity
Punjabi University
Shivaji University

2. Badminton (Men & Women)

Delhi University
Gauhati University
Gujarat University
Guru Nanak Dev University
Himachal Pradesh University
Kerala University
Panjab University
Ranchi University

3. Basketball (Men)

Berhampur University
Delhi University
Guru Nanak Dev University
Kerala Universiiy
Kurukshetra University
Madurai Kamaraj University
Mohan Lal Sukhadia University
Panjab University

4. Basketball (Women)

Berhampur University
Delhi University
Gujarat University
Guru Nanak Dev University
Kerala University
Kurukshetra University
Punjabi University
Rani Durgavati University

5. Football

Kerala University
Mysore University
North Bengal University
Osmania University
Panjab University
Punjabi University
Ranchi University
Rani Durgavati University

6. Hockey (Men)

Aligarh Muslim University
Baroda University
Berhampur University
Guru Nanak Dev University
Marathwada University
Mysore University
Panjab University
Ranchi University

7. Hockey (Women)

Delhi University
Guru Nanak Dev University
Himachal Pradesh University
Kerala University
Kurukshetra University
Punjabi University
Ranchi University
Rani Durgavati University

8. Volleyball (Men)

Andhra University
Gujarat University
Kerala University
Kurukshetra University
Madurai Kamaraj University
M.L. Sukhadia University
Panjab University
Ranchi University

9. Volleyball (Women)

Bharathiar University
Guru Nanak Dev University
Himachal Pradesh University
Kerala University
Osmania University
Punjabi University
Ranchi University
S.N.D.T. University

10. Wrestling

Amravati University
Banaras Hindu University
Guru Nanak Dev University
Haryana Agricultural Univ.
Kurukshetra University
Marathwada University
Meerut University
Shivaji University

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

BIOLOGICAL SCIENCES

Microbiology

1. Chattopadhyay, Shyamalendu. *Extracellular production of glutamic acid and valine by* **Bacillus** *sp.* U Burdwan.

2. Deuskar, Neelima J. *Immunological studies on Guellian Barro syndrome and other neurological diseases.* U Poona.

3. Ingle, Arun Onkarrao. *Studies on the microbial degradation of urea.* Nagpur U.

4. Mohinder Singh. *Role of* **Nocardia** *species iV bronchopulmonary disease.* GNDU, Amritsar.

5. Paul, Madhu. *Physico-chemical changes in selected legumes and cereals by the growth and metabolism of intestinal microorganisms.* Pb U, Chandigarh.

6. Rangan, Triveni. *Studies on thermostable amylase production by* **Bacillus cicheriformis**. U Calcutta.

7. Ray, Dipak Kumar. *Production of glutamic acid by* **Arthrobactar** *sp.* U Burdwan.

Biochemistry

1. Chattopadhyay, Dhrubajyoti. *Studies on the mechanism of replication and maintenance of a large number of phage genomes and the nature of their arrangement in the polyphage containing integrated 2 NCI prophages.* U Calcutta.

2. Chaudhuri, Tuli. *Effect of erythroprotein on the lipid biosynthesis of a rat erythrocyte membrane.* U Calcutta.

3. Dattaray, Asimkanti. *Studies on nitrate metabolism in* **Azospirillum brasilense**. U Calcutta.

4. Gangopadhyay, Runu. *Studies on the mode of action of some antitumour drugs.* U Calcutta.

5. Kaphalia, B.S. *Physical and chemical changes in mammalian red blood cells induced by* 1, 2, 3, 4, 5, 6-*hexachlorocyclohexane (HCH).* Kum U, Nainital.

6. Kunhi, A.A. Mohammad. *Studies on the nucleic acid hydrolysing enzymes of* **Aspergillus candidus** *M16a.* U Mysore.

7. Lahiri, Prabir. *Studies on certain aspects of thyroid hormone action in cold.* U Calcutta.

8. Mukhopadhyay, Syamali. *Chemical and biochemical studies on reproductive organs.* U Calcutta.

9. Pant, P.C. *Biochemical changes associated with maturity of some vegetables of Kumaun Hills.* Kum U, Nainital.

10. Ray, Ranjit. *Immunological studies on visceral leishmaniasis with reference to antigen components of* **Leishmania donovani**. U Calcutta.

11. Rai, Siddarthdev. *Studies on the interaction of phenolic compounds with abscissic acid in the control of growth and accompanying metabolic activities.* Devi Ahilya, Indore.

Marine Biology

1. Radha Devi, A. *Studies on Cumacea.* U Cochin.
2. Thomas, Ivy. *Studies on chitinoelastic bacteria in coastal zone.* U Cochin.

Anthropology

1. Balgir, Ranbir Singh. *Demo-genetic investigations among the Hindu and Muslim Gujjars: The two breeding isolates of sub-Himalayan and Himalayan Regions.* Pb U, Chandigarh.

2. Bandopadhyay, Pradip Kumar. *Leadership pattern in mizo society: A study of four Mizo villages.* Gauhati U.

3. Bhatia, Kuldeep Kumar. *Genetic structure of an inbred human isolate.* Pb U, Chandigarh.

Botany

1. Akkiraju, Veera Vikramaraju Narayana Raju. *Studies on the fossil of Kamthi beds of Maharashtra and upper Gondwana beds of Andhra Pradesh.* Shivaji U, Kolhapur.

2. Alka. *Developmental and histochemical studies in some members of families of order Polemoniales.* Meerut U.

3. Anand Prakash. *Histopathological studies of root knots in brinjal and tomato.* Meerut U.

4. Anis Fatima. *An anatomical investigation in the tribe epidendreae (Orchidaccae) of J.D. Hooker with special reference to an evaluation of inter-relationship of taxa and developmental morphology of stem.* NBU, Rajarammohunpur.

5. Bhattacharyya, Alok. *Responses of sunflower plants towards growth retardants with special reference to growth, metabolism and yield.* U Burdwan.

6. Channy Bala. *Studies on leaf spot disease of wheat,* **Triticum aestivum** *as induced by* **Helminthosporium sativum**. RDV, Jabalpur.

7. Das, Binay Kumar. *Investigation on the hyphomycetous fungi of West Bengal.* U Calcutta.

8. Datta, Syamali. *Taxonomic revision of bulbous Liliaceae in India.* U Calcutta.

9. De, Kalyan Kumar. *Study on callus tissue of certain legumes: Its differentiation and alteration in protein profile.* U Calcutta.

10. Dube, Bholeshwar. *An ecological study of aquatic fungal flora of lakes of Bhopal.* Bhopal U.

11. Girija, Akella Rama Lakshmi. *Embryological studies in Aizoaceae and phytochemical investigations in a few compositae.* Andhra U.

12. Goel, Anil Kumar. *Studies on the phytotoxic effects of certain nematicides and their interaction with gibberellic acid on the growth and development of tomato plant.* Meerut U.

13. Goel, Rakesh Kumar. *Comparative biology of some* **Alysicarpus** *species.* Mag U, Bodh Gaya.

14. Gopalakrishna Bhat, K. *Grasses and sedges of Coorg and South Kanara Districts of Karnataka: A taxonomic study.* U Mysore.

15. Gupta, Rajendra. *Studies on cholinesterase in Bengal gram and probable role of acetylcholine in plants.* U Delhi.

16. Gupta, Utpal. *A Study of solanaceous medicinal plants with special interest on their production of the active principle.* NBU, Rajarammohunpur.

17. Jagdish Singh. *Induced interchanges and mutations in lentil,* **Lens culinaris** *Med.* Meerut U.

18. Kulshreshtha, Praveen. *The effect of radiations and chemical mutagens on some pulse crops.* Meerut U.

19. Mishra, Nihar Manjari. *Studies in the biochemistry of senescence in cowpea,* **Vigna catuang** *Endl cotyledons.* Sambalpur U.

20. Misra, Rajlakshmi. *Studies on the biochemical aspects of water stress on seed germination and seedling growth.* Utkal U, Bhubaneswar.

21. Mohanty, Chitta Ranjan. *Inheritance of disease resistance in rice with special reference to blast,* **Pyricularia oryzae** *Cav.* Utkal U, Bhubaneswar.

22. Narendra Mohan. *Some studies on the effect of gibberellic acid on composition of plants and soil plant relationships.* Kanpur U.

23. Prasad, N.V.S.R.K. *Studies on the regulation of intermediary metabolism of* **Aspergillus nidulans**. U Delhi.

24. Ramanjaneyulu, R. *Physiological studies on* **Corynespora cassiicola** *(Berk and Curt) Wei and of the leaf spot disease development of brinjal,* **Solanum melongana** L. SVU, Tirupati.

25. Sarma, Jayanthi Sankara Prasad. *Chromosome studies and heterochromatin in different strains of Maydeae.* U Calcutta.

26. Satyanarayana, Maguluri. *Embryological studies in Verbenaceae and Labiatae.* Andhra U, Waltair.

27. Sharma, Banwari Lal. *Effect of brackish water on the morphological, physiological and biochemical characteristics of* **Nicotiana rustica** *in Bulandshahr District, U.P.* Meerut U.

28. Singh, Vidia Ram Ratan. *Morphological and experimental studies in* **Linum usitatissimum** *L. and* **Sesamum indicum** *L.* Meerut U.

29. Sreenath, H.L. *Cytogenetic and tissue culture studies in some commercially important species of aromatic grasses.* U Mysore.

30. Tarkeshwar Singh. *Genetic analysis of the characters contributing towards grain and total dry matter yield in common wheat,* **Triticum aestivum** *(L) em. Thell.* Kanpur U.

Zoology

1. Chalapathy Rao, M.V. *Studies on the muscle protein and associated metabolism of fish* **Tilapia mossambica** *Peters during starvation and refeeding.* SVU, Tirupati.

2. De, Jaykrishna. *Scanning electron microscopy of human hairs : A comparative study.* U Calcutta.

3. Guha, Shesha. *A study of chromosomes: Some hematological aspects and estimation of enzymes in certain species of fishes.* RDV, Jabalpur.

4. Jindal, Rajinder. *Limnological studies on some freshwater ponds of North India,* Pb U, Chandigarh.

5. Kanaka Durga, M.R. *Studies on the intertidal poriferans and their associates at Visakhapatnam Coast.* Andhra U, Waltair.

6. Khan, A.H. *Chemoarchitectonics of the central nervous system of turtle,* **Lissemys punctata** *Granosa with special reference to medula spinalis rhombencephalon and mesencephalon.* Saur U, Rajkot.

7. Krishna Rao, Garimella Venkata. *Studies on respiration of the fiddler crabs,* **Uca annulipes** *Latreille and* **Uca triangularis** *Milne-Edwards from Visakhapatnam Harbour.* Andhra U, Waltair.

8. Kuthiala, Arun. *Sterols, their metabolism and the inhibitive effects of 2,5-azasteroids in* **Spodoptera litura** *F.* U Delhi.

9. Malik Iqbal. *A study of selected behavioural traits of rhesus monkeys in free ranging environments.* Kanpur U.

10. Mandal, Dipakranjan. *Investigation on protozoan parasites of wild mammals of Sundarbans and Betla forest.* U Calcutta.

11. Marwah, Ranjana. *Studies on the effect of Nemacur on* **Meloidogyne incognita.** Pb U, Chandigarh.

12. Mehrotra, Beenu. *Morphology of* **Aphraniola vishnou** *(Mathur 1983) (Cimicidae: Heteroptera): A common blood sucking ectoparasite on* **Scotophilus temmincki Wronghtoni** *(Thomas 1897) (Microchiroptera).* Kanpur U.

13. Pradhān, Gagan Bihari. *Ecological studies on soil nematodes of some tropical ecosystems and their relationship with rhizosphere, environmental factors, herbage production and decomposition of organic matter.* Sambalpur U.

14. Rajamani, S. *Factors affecting gall midge resistance in paddy.* Utkal U, Bhubaneswar.

15. Ramanjaneyulu, Javvaji Venkata. *Cytological studies on some digenetic trematodes.* Andhra U, Waltair.

16. Sanjeev Kumar. *Cytochemical, biochemical and histopathological studies on* **Bunostomum trigonocephalum** *(Rud, 1808). Raillist,* 1902. Meerut U.

17. Saxena, Aparna. *Effects of the solar eclipse of February* 16, 1980 *on mice of the lacca strain.* Pb U, Chandigarh.

18. Sharma, Vijay Prakash. *Neurohistological and histochemical studies on the alimentary tract of poikilothermal vertebrates.* Bhopal U.

19. Shrivastav, R.N. *Histomorphology of the pituitary gland and its correlation with the gonadal cycle of* **Hirudo fluvicola Blyth**. Vikram U, Ujjan.

20. Shrivastava, Sandhya. *The effects of organic mecurials on the endocrine glands in pigeons.* Bhopal U.

21. Singhal, Lalit Kumar. *Role of the photo-periodism and its relationship with circadian rhythms of activity in a tropical bird.* Kanpur U.

22. Sinha, Maniranjan. *Biology and fishery of the canine catfish eel,* **Plotosus canius.** U Calcutta.

23. Sinha, Neeraj. *Carcinogenic effect of small doses of* Co^{60}*radiation during intra-uterine life.* Kanpur U.

24. Srinivasa Murthy, K. *Modulation of carbohydrate and associated metabolism in the selected tissues of fresh water mussel,* **Lamellidens marginalis** *during induced methyl water parathion stress.* SVU, Tirupati.

25. Thomas, John. *Effects of some formulated diets on the growth, survival and yield of common carp,* **Cyprinus carpio** *var communis.* PAU, Ludhiana.

26. Vaidya, Vasundhara. *Limnology of river Khan (Indore) with special reference to pollution and eutrophication.* Bhopal U.

27. Venkateswara Rao, Thalupunuri. *Studies on the effect of temperature and salinity on the physiology of* **Pontardrilus bermudensis** *Beddard (Annelida: Oligochaeta) from Visakhapatnam harbour.* Andhra U, Waltair.

Medical Sciences

1. Gurcharan Kaur. *Regulation of oxidative pathways in rat brain under hormonally and drug induced conditions.* JNU, Delhi.

2. Iyengar, Bhanu. *Neuroectoderm primitive streak interactions with reference to copper catalysis.* U Delhi.

3. Mayanil, Chandra Shekhar Keshao. *Regulation of ATPase and monoamine metabolising enzymes in rat brain.* JNU, Delhi.

Agriculture

1. Ajit Singh. *The standardization of the foliar sampling technique in peach,* **Prunus persica Batch.** PAU, Ludhiana.

2. Anserwadekar, Kishan Wamanrao. *Studies on the N,P,K, nutrition spacing and their effects on the vase life with different chemicals in* **Gladiolus grandiflora** *CV. HB., Pitt.* Marath Krishi, Parbhani.

3. Babasaheb, Ghorpade Prakash. *Evaluation of combining ability analysis in relation to cotton breeding.* PAU, Ludhiana.

4. Badwal, S.S. *Genotype-environment interaction in a diallel cross of Indian mustard,* **Brassica juncea** *(L) Czern and Coss.* Meerut U.

5. Bandyopadhyay, Biswanath. *Some fundamental studies on the mixtures of organic and inorganic components of soils.* NBU, Rajarammohunpur.

6. Gurjant Singh. *Effect of pesticidal and fertilizer applications on pest complex and growth of green gram,* **Vigna radiata** *(L). Wilczek.* PAU, Ludhiana.

7. Handa, Dinesh Kumar. *Studies on molya disease,* **Heterodera avenae** *Wall of wheat and barley with special emphasis on its control.* U Raj, Jaipur.

8. Jag Pal Singh. *Nutritional studies in mustard* **Brassica** *spp. in relation to soil test values.* CSAT, Kanpur.

9. Joshi, A.K. *Biochemical and physiological studies in relation to hybrid vigour in plants.* Saur U, Rajkot.

10. Kuldip Singh. *Studies on the lentil rust caused by* **Uromyces fabae** *(Pers.) de Bary.* PAU, Ludhiana.

11. Mahipal Singh. *Differential impact of milk co-operatives in rural Uttar Pradesh.* Kanpur U.

12. Mallick, Abdul Sattar. *Genetic architecture of yield and quality components of sorghum,* **Sorghum bicolor** *(L.) Moench.* CSAT, Kanpur.

13. Mallik, Sukumar. *Genetic nature of some agronomic traits of rice associated with adaptation in reinfed low lands.* U Calcutta.

14. Mathauda, Surinderjit Singh. *Growth pattern and yield response of raye cultivars under variable watering and planting schedules.* PAU, Ludhiana.

15. Mir, Syeedullah. *Erodibility studies of some soils of Kashmir Valley as related to their conservation and management.* CSAT, Kanpur.

16. Mukku, Kuldeep Nath. *Constraints to apple production under varying conditions of Kashmir Valley.* CSAT, Kanpur.

17. Pandey, Ashok Kumar. *Some studies on soil plant relationship of barley,* **Hordeum vulgare** *L. and paddy,* **Oryza sativa** *L. plants in relation to chelate supply.* Kanpur U.

18. Ravindran, A. *Electrophysiological investigations in drought resistant and susceptible varieties of wheat,* **Triticum aestivum** *L.* JNU, Delhi.

19. Ray, Rabindranath. *Study of orchard efficiency analysis of Litchi,* **Litchi chinensis.** U Calcutta.

20. Robert Cecil, S. *Mineral nutrition of the coconut palm,* **Cocos nucifera** *L. in health and disease with special emphasis on calcium and magnesium.* U Ker, Trivandrum.

21. Sarb Mittar. *Genetic variability and pollination behaviour in egyptian clover,* **Trifolium alexandrinum** *L. PAU,* Ludhiana.

22. Shirjooposht, Moazam Hassanpour Asil. *Influence of nitrogen fertilizer, irrigation and preharvest foliar application of maleic hydrazide on postharvest behaviour of onion,* **Allium cepa** *L. bulbs under several storage conditions.* MP Krishi, Rahuri.

23. Sukhbir Singh. *Nitrogen economy through* **Azotobacter** *at different levels of nitrogen and phosphorus for important varieties of maize.* Meerut U.

24. Suresh Chandra. *Studies on the effect of fertilizer-insecticide combinations on the insect population and vegetative characters of bhindi,* **Abelmoschus esculentus** *(L.) Moench.* CSAT, Kanpur.

25. Surinder Kumar. *Drying pattern of bare and tilled silt loam, sandy loam and loamy sand soils as affected by zero-time water profile and evaporativity.* PAU, Ludhiana.

26. Tewari, Ram Kumar. *Physico-chemical effects of certain modern insecticides on sugarcane leaf hopper,* **Pyrilla perpusilla** *Wlk. (Hemiptera: Fulgoridae) and its ectoparasite,* **Epipyrops malanolenca** *Flet (Lepidoptera: Epipyropidae).* CSAT, Kanpur.

27. Tomar, Harpal Singh. *Efficiency of selection for yield per se as compared to selection for yield components in wheat,* **Triticum aestivum** *L.* Meerut U.

28. Wani, Mohammad Yousuf. *Transformation of nitrogen, phosphorus and zinc in soils of Kashmir and their availability to paddy crop.* CSAT, Kanpur.

Veterinary Science

1. Bugalia, Naunihal Singh. *Biochemical and histochemical studies on bovine endometrium.* PAU, Ludhiana.

2. Chaudhry, Ravi Kumar. *Biochemical studies on sarcocysts of* **Sarcocystis fusiformis** *of the buffalo,* **Bubalus bubalis.** JN Krishi, Jabalpur.

3. Pangawkar, Govind Rajaram. *Biochemical and cytomorphological studies on normal and subbertile bull semen.* PAU, Ludhiana.

4. Nandi, Sambhunath. *Investigation of bovine haematuria in India.* U Calcutta.

5. Singh, Bhubaneshwar Prasad. *Studies on bovine trypanosomiasis with special reference to diagnosis and therapy.* PAU, Ludhiana.

6. Srivastava, Anil Kumar. *Pharmacokinetics and therapeutic evaluation of oximes in buffalo calves.* PAU, Ludhiana.

CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in AIU Library during February, 1984.

EDUCATIONAL PHILOSOPHY

Hawkins, Hugh. A history of creative tension. *Change* 15(7), 1983, 34-7.

EDUCATIONAL PSYCHOLOGY

Hattie, John. The tendency to omit items : Another deviant response characteristic. *Endl Psy Measurement* 43(3), 1983, 1041-5.

Ryan, Joseph. P. Introduction to latent trait analysis and item response theory. *New Directions Testing Measurement* (19), 1983, 49-64.

Saxena, A.K. Hostility and alienation among university students during emergency and after emergency. *ICSSR Res Abs Q* 10(3 & 4), 1981, 9-21.

EDUCATIONAL SOCIOLOGY

Adiseshiah, Malcolm S. Role of universities in international co-operation for development. *Bull Unesco Asia* (24), 1983, 95-108.

Booth, Tony. Policies towards the integration of mentally handicapped children in education. *Oxford Rev Edn* 9(3), 1983, 255-68.

Jacob, P.S. Priming for remedial education. *New Frontiers Edn* 13(4), 1983, 12-16.

EDUCATIONAL ADMINISTRATION

Elton, Lewis. Conferences: Making a good thing rather better? *British J Ednl Tech.* 14(3), 1983, 200-15.

Ganesh, S.R. Building management education institutions: Processes and performance. *ICSSR Res Abs Q* 10(3 & 4) 1981, 67-89.

Nair, T.K.D. Decision making: A framework for educational institutions. *Indian Edn* 13(10-11) 1984, 17-9.

TEACHING

Daloz, Laurent A. Mentors: Teachers who make a difference. *Change* 15(6), 1983, 24-7.

EDUCATIONAL RESEARCH

Seshadri, C. Research in philosophy of education. *Indian Ednl Rev* 18(4), 1983, 99-105.

EDUCATIONAL TECHNOLOGY

Barker, P.G. and Singh, R. A practical introduction to authoring for computer assisted instruction. Part 2: PILOT. *British J Ednl Tech* 14(3), 1983, 174-200.

Hambleton, Ronald K. and others. Applications of microcomputers to classroom testing. *New Directions Testing Measurement* (19), 1983, 65-77.

Hawkridge, David and McCormick, Bob. China's television universities. *British J Ednl Tech* 14(3), 1983, 160-73.

EVALUATION

Ansley, Timothy N. and Forsyth, Robert A. Relationship of elementary and secondary school achievement test scores to college performance. *Ednl Psy Measurement* 43(3), 1983, 1103-12.

Gillmore, Gerald M. and others. The dependability of student evaluations of teaching effectiveness: Matching the conclusions to the design. *Ednl Psy Measurement* 43(3), 1983, 1015-18.

Hambleton, Ronald K. and De Gruijter, Dato N.M. Application of item response models to criterion-referenced test item selection. *J Ednl Measurement* 20(4), 1983, 355-67.

Jones, Douglas H. and Szatrowski, Ted H. On the statistical determination of content validity. *Ednl Psy Measurement* 43(4), 1983, 995-1004.

Michael, Joan J. and others. The prediction of academic achievement in graduate study in education. *Ednl Psy Measurement* 43(3), 1983, 1133-9.

Natarajan, K.V. Evaluation system in Indian conditions. *J. Indian Edn* 9(1), 1983, 42-4.

Pandey, Devesh Dutt. Uses and abuses of periodical test system in evaluation of classroom learning. *Indian Ednl Rev* 18(4), 1983, 135-42.

Wiegand, Patrick. Objective tests in geography at 16 plus. *Ednl Res* 24(4), 1982, 308-9.

ECONOMICS OF EDUCATION

Garg, V.P. Cost-analysis for educational planning: Some basic issues. *New Frontiers Edn* 13(4), 1983, 40-9.

Hussain, M.A. The role of education in economic development in India : An explanatory analysis. *Indian Ednl Rev* 18(4), 1983, 15-27.

Lynton, Ernest A. Reexamining the role of the university. *Change* 15(7), 1983, 18-23, 53.

EDUCATIONAL JOURNALISM

EDUCATIONAL JOURNALISM. *J Indian Edn* 9(2), 1983 1-84.

ADULT EDUCATION

Fletcher, Colin. Adult education and community needs: Towards a distinctive university extra-mural contribution. *Studies in Adult Edn* (15), 1983, 60-6.

Hawkridge, David. Evaluation of the open university. *Hr Edn in Europe* 8(3), 1983, 39-45.

Jennings, Bernard. The open-door university: A strategy for continuing education leading to degrees. *Studies in Adult Edn* (15), 1983, 47-59.

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CLASSIFIED ADVERTISEMENTS

GURUKULA KANGRI VISHWAVIDYALAYA HARDWAR

No. GKV/Estt/84

Dated : 15th March, 1984

Advertisement

Application in duplicate on plain paper with attested copies of testimonials, certificates, etc. are invited for the following post so as to reach the undersigned with postal order payable to Registrar, Gurukula Kangri Vishwavidyalaya, value Rs. 10/- upto **15th April, 1984.**

Professor : Philosophy: Grade : Rs. 1500-60-1800-100-2000-125-2500.

Qualifications : An eminent scholar with published work of high quality actively engaged in research in the field of basic texts in Indian Philosophy preferably in the field of Nyaya and Adwaita Vedanta. Deep and fluent knowledge in Sanskrit essential. Ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar who has made significant contribution to knowledge with established reputation in the field of basic texts in Indian Philosophy as stated above.

Note: (i) Female candidates need not apply.
(ii) Qualifications may be relaxed by the Selection Committee for experienced persons.
(iii) Higher start may be given to the deserving candidates.
(iv) Teachers will be expected to do Research and extension work.
(v) Applicants should mention names of two referees not related to them.
(vi) Three passport size photograph should be attached with the application.

Dr. J.S. Sengar
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY

MADRAS

Advertisement No. IITM/R/3/84

Applications are invited for the following posts at this Institute:

1. **Lecturer in German** (One post) in the pay scale of Rs. 700-40-1100-50-1600 plus allowances for the Department of Humanities & Social Sciences.

Essential Qualifications

(i) A good academic record with Master's degree in German language.
(ii) 2 years experience in teaching language & literature and/or research.

Desirable Qualifications

(a) Experience with scientific & technical German;
(b) language laboratory experience;
(c) ability to prepare teaching materials;
(d) ability to guide research candidates;
(e) knowledge of other foreign language(s)
(f) Library experience;
(g) typing ability. (German).

2. **Assistant Librarian** (One post) in the pay scale of Rs. 700-40-1100-50-1600 plus allowances.

Essential Qualifications

(i) Good academic record with atleast a high second class Master's degree in Electronics Engineering or Computer Science.
(ii) Master's degree in Library Science with first or high second class.

Desirable Qualifications

Experience in Programming using a high level language like FORTRON, BASIC or PL/I preferably in Library field.

3. **Assistant Stores & Purchase Officer** (One post) in the pay scale of Rs. 700-40-900-EB-40-1100-50-1300 plus allowances:

Qualification & Experience

(a) Must be a graduate;
(b) Minimum of 7 years of experience in purchase and stores of reputed organisation.
(c) Knowledge of procurement of indigeneous stores, inventory control, import, shipping, customs clearance and stores maintenance.

Posts at Sl. Nos. 2 & 3 are reserved for Scheduled Caste/Tribe candidates for whom the qualification regarding experience is relaxable at the discretion of the competent authority, if at any stage of selection the competent authority is of the opinion that sufficient number of candidates from these communities possessing the requisite experience are not likely to be available to fill up the vacancies reserved for them.

For application forms, please address the REGISTRAR, INDIAN INSTITUTE OF TECHNOLOGY, MADRAS 600 036 with a self addressed stamped (Re. 0.90) envelope (26 cm x 11 cm). Persons in the service of Government establishments and Public Sector undertakings should apply through proper channel, otherwise their applications will not be considered. Completed applications with Indian Postal Order to the value of Rs. 7.50 (Rs. 1.90 for SC/ST candidates) should be sent to the Registrar. The last date for the receipt of completed applications is **20-4-1984.**

S. Santanagopalan
REGISTRAR

UNIVERSITY NEWS

A Weekly Journal of Higher Education & Research

(Published on : 1, 8, 16 & 23 of every month)

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ALIGARH
Advertisement No. 37/83-84

Applications on the prescribed form are invited for the following posts:

Readers

Scale of Pay : Rs. 1200-50-1300-60-1900 plus allowances.

1. **Reader in West Asian Studies (Geography) Centre of West Asian Studies.**
2. **Reader in West Asian Studies (Economics) Centre of West Asian Studies**
3. **Reader in West Asian Studies (Political Science) Centre of West Asian Studies.**

Qualifications

I—Essential : (a) A first or a high second class Master's degree in the subject concerned of an Indian University or an equivalent foreign qualification;

(b) A research degree of a Doctorate standard or published work of a high standard; and

(c) At least five years experience of teaching post-graduate classes and some experience of guiding research.

II—Desirable : For Posts Nos. 1 and 2, Reader in West Asian Studies (Geography)/(Economics) Centre of West Asian Studies.

First hand knowledge of current West Asian Geography/Economic trends. Working knowledge of Arabic or any other West Asian Language.

For Post No. 3, Reader in West Asian Studies (Political Science) Centre of West Asian Studies.

First hand knowledge of West Asian Political trends. Working knowledge of any other West Asian Language or Modern European Language.

Lecturers

Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances.

4. **Lecturer in West Asian Studies (Economics) Centre of West Asian Studies**
5. **Lecturer in West Asian Studies (Sociology) Centre of West Asian Studies.**
6. **Lecturer in West Asian Studies (Arabic) Centre of West Asian Studies.**

Qualifications

I—Essential : (a) A Doctor's degree or research work of an equally high standard.

(b) Consistently good academic record with first or high second class (B in the seven point scale) Master's degree in the relevant subject or an equivalent degree of a foreign University.

Having regard to the need for developing inter-disciplinary programmes the degrees in (a) and (b) above may be in relevant subject.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualification prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a consistently god academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research Laboratory/Organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within five years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

II—Desirable : Working knowledge of Arabic or any other West Asian Language.

Higher initial start may be given to candidates possessing exceptional qualifications and experience. Candidates interviewed may be paid contribution towards their T.A. equal to one single second class Railway fare only.

Prescribed application forms and instructions may be had from the Assistant Registrar (Selection Commitees) Registrar's Office, A.M.U., Aligarh on payment of lump sum amount of Rs. 5/- in cash (to be deposited in the Cash Section, Finance Office, A.M.U. Aligarh) or through an Indian Postal Order payable to the Finance Officer, A.M.U., Aligarh either personally or by sending a self-addressed Stamped envelope of 23 x 10 cm. **Last date for receipt of applications is 21st April, 1984 (upto 4.00 P.M. only). Incomplete applications and those received late will not be considered.**

Note: Suitable persons may be kept on panel for future appointment.

Zamir Ahmed Khan
REGISTRAR.

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA
BARODA-390002
Notification No. 10

Dated : 27.2.1984

Applications are invited for the following posts under the University School of Management Studies and Research, presently, in the Faculty of Commerce.

The Prescribed Forms will be available **up to 28-4-1984** alongwith the details of Qualifications and Specialisations from the undersigned on pre payment of Crossed Indian Postal Order of Rs. 2.00 (Rs. 00.50 for members of SC/ST) payable to the Registrar, M.S. University of Baroda alongwith a self-addressed envelope of 30 cms x 12 cms for each post. The Form will be available in person during working days between 11.30 a.m. to 2.00 p.m.

The applicant at the time of requesting for the prescribed form/s should mention very specifically the Post Number also for which the forms are required. The SC/ST applicants will attach a Certificate to this effect.

Posts

1. **Professor of Accounts: :** (Financial Management, Managerial Accounting, Tax Management).
2. **Professor for Business Economics :** (Managerial Economics, Labour Economics).
3. **Professor of Commerce Including Business Administration :** (Personnel Management, Organisational Behaviour).
4. **Professor of Marketing :** (Marketing Research, Consumer Behaviour Quantitative Techniques).
5. **Professor of Production Management.**
6. **Lecturer in Organisational Behaviour .**
7. **Lecturer in Marketing.**

Scale of Pay

Professor : Rs. 1500-60-1800-100-2000-125/2-2500

Lecturer : Rs. 700-40-1100-50-1300-Assessment-50-1600.

The Application Form duly completed be sent to the Registrar, M.S. University of Baroda, Baroda-2 alongwith a Crossed Indian Postal Order for Rs. 10.00 (Rs. 2.50 ps. for SC/ST applicant) for the posts of Professor and for Rs. 8.00 (Rs. 2.00 for SC/ST applicant) for the posts of Lecturer payable to the Registrar, M.S. University of Baroda **on or before 19-5-84.**

Applications on plain paper will not be considered.

The candidates if called for interview will have to come **at their own expenses.**

REGISTRAR

UNIVERSITY OF CALICUT
Calicut University P.O. 673 635
No. Ad. F2/2136/84
Dated: 5-3-1984

Notification

1. Applications are invited from qualified candidates for appointment to the post of Registrar of the University of Calicut. The post carries the scale of pay of Rs. 1650-75-2175 and usual allowances.

2. Candidates should have a First or Second Class Post-graduate degree and five years teaching experience at University level and about 5 years of administrative experience in a responsible post including management of staff in a University or College or similar institutions.

Age : Between 40 and 50 years.

3. Applications on plain paper containing details of qualification, experience, age, etc. along with true copies of relevant certificates and a crossed postal order for Rs. 10/- drawn in favour of the FINANCE OFFICER, UNIVERSITY OF CALICUT and payable at CALICUT UNIVERSITY POST OFFICE should reach the undersigned on or before **April 10, 1984.**

REGISTRAR

RANI DURGAVATI VISHWAVIDYALAYA

JABALPUR

No. Estt/84/110

Dated : 1-3-84.

Notification

The last date for receipt of applications (on prescribed forms) for one post of Reader in the Department of Journalism and Mass Communication as notified vide advertisement No. Estt/84/118, dated 8-2-1984, is hereby extended upto the **20th April 1984**.

REGISTRAR

ALL-INDIA INSTITUTE OF MEDICAL SCIENCES

Advertisement No. 2/84.

Applications on prescribed forms are invited so as to reach the Registrar (Academic), All-India Institute of Medical Sciences, New Delhi 110029 by 10th April, 1984 for selection of Junior Residents, Senior Residents and admission to other postgraduate courses for July, 1984 session.

I. Junior Residency (Postgraduate courses).

1. M.D.

1. Anaesthesiology	2
2. Biochemistry	1
3. Biophysics	1
4. Dermatology & Venereology	1
5. Forensic Medicine	1
6. Medicine	3
7. Microbiology	1
8. Obst. & Gynaecology	2
9. Ophthalmology	9
10. Paediatrics	2
11. Pathology	2
12. Psychiatry	1
13. Pharmacology	1
14. Physiology	2
15. Preventive & Social Medicine	2
16. Radiodiagnosis	1
17. Radiotherapy	1

2. M.S.

1. Anatomy	2
2. Orthopaedics	1
3. Otorhinolaryngology	1
4. Surgery	3

Eligibility

A candidate must possess MBBS degree of the AIIMS or of a University recognised by this Institute and must have completed the required period of pre-registration Internship/rotating housemanship in a recognised hospital.

II. First year Junior Residency (House Job) in Dental Surgery.

No of seats—3

III. M.H.A. (Master in Hospital Administration).

IV. Ph.D. in Anatomy, Biochemistry, Biophysics, Community Medicine, Forensic Medicine, Medicine, Microbiology, Nuclear Medicine, Pathology, Paediatrics Physiology & Radiotherapy.

Facilities for Ph.D. in Bio-chemistry, Microbiology and Pharmacology are also available at Dr. R.P. Centre for Ophthalmic Sciences.

M.Sc.

Anatomy, Biochemistry, Biophysics, Drug Assay, Pharmacology, Physiology.

Qualifications

M.Sc. (Drug Assay) : B. Pharma, or B.Sc. (Hons.) Human Biology of AIIMS with 60% marks in aggregate.

M.Sc. Anatomy, Biochemistry, Biophysics, Pharmacology & Physiology.

B.Sc. (Hons.) Human Biology of the AIIMS or B.Sc. (Life Sciences) or B.V. Sc. or B.Sc. (Hons.) in the respective subjects or MBBS with atleast 60% marks in aggregate in any of the above examinations.

V. Senior Residency and admission to post-doctoral courses leading to the award of degree of M.Ch./D.M.

M. Ch.

1. Paediatric Surgery : One post (Reserved for S/C).
2. Urology : Two posts.

D.M.

1. Cardiology : Two posts.
2. Neurology : One post.

Senior Resident Only

1. Dermatology & Venereology : One post (Reserved for S/C).
2. Paediatrics : One post.
3. Medical Oncology at IRCH : Two posts (One reserved for S/T).
4. Radiodiagnosis : Four posts (One reserved for S/T).
5. Radiodiagnosis at Neuro Sciences Centre—AIIMS : One post.
6. Radiotherapy : One post (reserved for S/C).
7. Radiotherapy at IRCH : Two posts (One reserved for S/C).
8. Rehabilitation & Art. Limbs : One post (Reserved for S/C).

Tutors

1. Anatomy : Four posts (One reserved for S/T).
2. Forensic Medicine : One post.
3. Microbiology : Two posts.
4. Medical Physics at IRCH : One post.
5. Pathology : One post.
6. Pharmacology : Three posts (Two reserved for S/C).
7. Physiology : Two posts (One reserved for S/C).
8. Preventive & Social Medicine : Two posts (One reserved for S/T).

Qualifications

A postgraduate degree/diploma in the respective discipline.

Pay Scale

Junior Residents : Rs. 500-50-600/- emoluments.

Senior Residents : Rs. 650-30-710/- + postgraduate allowance of Rs. 100/- and Rs. 50/- per month for holder of postgraduate degree and diploma respectively.

Tutors : Rs. 650-30-710/- + postgraduate allowances of Rs. 100/- pe month to those holding MD/MS degree.

Upper Age Limit

For Senior Residents (where post-doctoral courses are not available) and Tutors—30 years, relaxable for Scheduled Caste and Scheduled Tribe candidates upto a maximum of five years.

General Information

For further details prospectus may be consulted.

(i) 33% of the total of the postgraduate seats are reserved for the AIIMS graduates.

(ii) 20% of the total of the postgraduate seats are reserved for the candidates belonging to Scheduled Caste/Tribe communities.

(iii) 5% of the total seats for postgraduate courses are reserved for those who have served in the rural areas for more than 2 years or doing private practice in rural areas, having less than 5 thousand population for more than 2 years, medical graduates of backward areas and those who are working under the Family Welfare Programme.

The application forms and other information can be obtained from the office of the Registrar (Acad.) on payment of Rs. 5/- by crossed postal order payable to the Director, All-India Institute of Medical Sciences, New Delhi or can be obtained personally against postal order for Rs. 5/- on working days from the office of the Registrar (Academic).

The forms by post shall be issued only upto **2nd April, 1984.**

The candidates in employment must forward their application through proper channel. In case, candidates anticipate delay in the transit of their applications through proper channel, they must send an advance copy so as to reach before the closing date.

Prescribed form for the post of Senior Residents/Tutors where post-doctoral (D.M./M.Ch.) courses are not available can be obtained personally or by sending a self-addressed envelope with 80 paise stamp from the office of the Registrar (Academic).

For Junior Residency (M.D./M.S.) course a candidate can apply maximum in two subjects. In case a candidate wishes to apply for two subjects, he should submit only one form indicating both the choices—in order of preference and enclose postal order for Rs. 60/-. In case of applying for one subject a postal order for Rs. 30/- only to be enclosed with the application. **For other courses separate application form for each subject discipline be used.**

Note : While sending the request for prospectus it may clearly be indicated on the top of the envelope the course/post for which the request is being sent.

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University News

PRIL 1, 1984

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Smt. Sarla Grewal, Secretary to the Government of India, Ministry of Education & Culture, delivering the Convocation Address of the Dayalbagh Educational Institute at Agra. On her left are : Justice G.D. Sehgal, President of the Institute and Dr. (Mrs.) G.P. Sherry, Director.

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UNIVERSITY NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :
M.S. RAMAMURTHY

1 MAY 1984
C.F.T.R.I., MYSOR

AIU—Present & Future

A voluntary agency, in India especially, has always been shy of seeking publicity. This explains why many laudable efforts being undertaken or noble services being rendered by multitudinous number of voluntary agencies in this country do not receive national attention. This is so despite the tremendous improvement in communication media that has taken place over the last three decades. Is there something in the ethos? This question is better left unanswered !

The Association of Indian Universities (AIU), essentially a voluntary Association and performing basically what can be termed as service functions on behalf of member universities, has also been shy of seeking publicity. Nevertheless occasional exercises in stating what it is doing are called for. This exercise itself, against the background of what has been termed as 'ethos', would be a proof enough of the quality of leadership that AIU possesses to some degree. Over the last one year or so AIU has boldly ventured into diversifying and enlarging its activities. Some of the notable features that would merit attention are : a broad base of its membership; vigorous sales and publications efforts; "University News" becoming a weekly journal to provide a better forum for dissemination of information and interaction amongst the academics; a success in our efforts with the Government of India for giving financial assistance for the conduct of Inter-University tournaments in various sports and games at the Universities; a sustained effort to develop talent in sports through organisation of university level coaching camps; a close and collaborative interaction with the universities in the areas of examination reforms and economics of education; an effort to actively carry the message of AIU to different regions by holding meetings of AIU Committees and Sub-Committees and Book Exhibitions in different university centres; and the like.

Not merely has AIU diversified its activities as above, it has also started some forward planning. The Association would be sixty years old in 1985. As part of the Diamond Jubilee celebrations several activities and new ventures are expected to be initiated. A high powered committee has been constituted to identify and proceed with the implementation of the programme for jubilee celebrations next year.

Most importantly, the AIU is now in a position to confidently hope that its dream of having a building of its own, is likely to be fulfilled by the end of 1984, and the facilities of AIU House made available to the universities and the visiting Vice-Chancellors.

As a service agency AIU is perforce to depend on collective leadership. But collective leadership also means a leader who can collectively lead. The Association has been fortunate in having a galaxy of able Presidents who have contributed unstintingly their time and efforts for bringing AIU to its present status. Professor R.C. Paul, Vice-Chancellor, Panjab University, steered the Association as the President during the year 1983-84, and we greatly benefited by his leadership and dynamism.

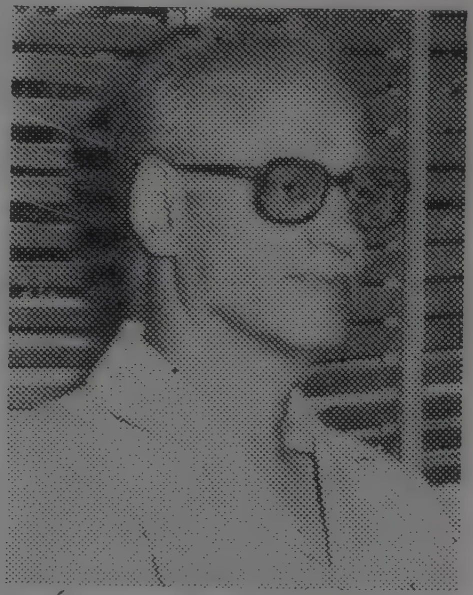
On 1st of April 1984, Professor M.S. Gore, Vice-Chancellor, University of Bombay, takes over as President of the Association of Indian Universities. Prof. Gore is no stranger either to the academic world or to the community of Vice-Chancellors. We heartily welcome Prof. Gore as our President and we are confident that his leadership during 1984-85 will help us in attaining more strength.

Professor M.S. Gore takes over as AIU President

Madhav Sadashiv Gore, obtained D.S.S.A. in Social Work from the Tata Institute of Social Sciences in 1945, M.A. in Sociology from Bombay University in 1948 and Ph.D. in Sociology from Columbia University, USA in 1960. In 1975 Prof. Gore was awarded the Padma Bhushan by the President of India, and in 1974 the Silver Jubilee Award for Social Scientist established by the Indian Council of Social Welfare. He has been a recipient of a number of scholastic distinctions including Sir Dorabji Tata Research Scholar at the Tata Institute of Social Sciences, Fulbright award at the Columbia University, a Fulbright teacher award in 1960-61 and in 1982-83, was a senior awardee of Homi Bhabha Fellowships Council, Bombay.

He was lecturer and Principal of the Delhi School of Social Work and later took over as Director of the Tata Institute of Social Sciences, Bombay in 1962. In 1983, he took over as the Vice-Chancellor of the University of Bombay. During 1960-61, he was a visiting lecturer at Beloit College and Wisconsin University in USA.

Prof. Gore has delivered a number of Memorial/Felicitation lectures including the N.M. Joshi Memorial Lecture in 1980, the Everlyn Henry Memorial Lecture at the Delhi School of Social Work in 1979 and Mr. R.S. Hukkerikar Memorial Lecture in Dharwad in 1977. Prof. Gore is a member of several professional Associations like the Indian Sociological Society, Indian Council of Social Science Research, Board of Governors of the Centre for Social Studies at Surat and Academy of Advisors, Jamnalal Bajaj Foundation, Bombay. He is also a Fellow of the Indian Society of Criminology.



Prof. M. S. Gore

Prof. Gore is an author of several books: Social Work and Social Work Education; Urbanization and Family Change; Immigrants and Neighbourhoods; Some Aspects of Social Development; Indian Youth : Processes of Socialization; Education and Modernisation. He is also the co-author of two other books, Editor of Problems of Rural Change published by University of Delhi, Co-Editor of Papers in the Sociology of Education published by NCERT and Honorary Editor of Encyclopedia of Social Work in India published by the Planning Commission of the Government of India. He has to his credit more than 30 papers published in various journals both in India and abroad.

Prof. Gore has varied professional experience including special assignments as a Member of the National Police Commission, as President of Indian Society of Criminology, as Chairman of Indian Council of Social Science Research, as Chairman of the Study Team on Role of Social Sciences in Professional Education (appointed jointly by the UGC and the ICSSR), as Chairman, Committee of Police Training, Government of India, as President, Association of Schools of Social Work in India, and as Vice-President, International Association of Schools of Social Work.

The members as well as the staff of AIU welcome Professor Gore as their new President and offer their whole-hearted support in strengthening the AIU services to the university community and the country at large.

Role of PAU in Rural Development

Sukhdev Singh*

The Punjab Agricultural University has completed 22 years of its fruitful existence. During this period the University has made a creditable record of significant research achievements, which have made the Punjab the granary of India contributing about 60-70% of wheat and 40-50 per cent of rice to the central pool. This has happened to a great extent on the understanding of the totality of the situation in which the new technologies are created, processed, communicated and integrated into the farming system.

The University has not only developed more than 300 varieties of miracle seeds of wheat, rice, sugarcane, maize, cotton, vegetables etc but also developed the relevant technology to obtain optimum yields.

The varieties evolved at the Punjab Agricultural University have not become popular in Punjab only but also have been adopted for cultivation in other parts of the country and even outside the country in Pakistan. The Pakistan Government imported 10,000 quintals of seed of WL-711 variety of wheat in 1978. Some other improved varieties of wheat are KSML-3 the first multi-line variety of wheat in the world, WL-1562, DWL-5023, PBW-34 etc. In rice the new semi-fine variety PR-106 is now occupying 50 to 60 per cent of the area. The yield potential of this fine grained variety is as high as 75 quintals per hectare as against 40 quintals of the earlier tall varieties. Crop improvement work is being done for other crops also like sugarcane, cotton, maize, barley, pulses, oilseeds, etc. besides vegetables and fruit crops. The sugarcane variety CoJ. 64 developed by the PAU gives the highest sugar recovery in North India. Under the All-India Coordinated Fruit Improvement project on citrus, the Centre at Ludhiana is the first in the country which has reached the stage where it is able to supply the virus free material for the important citrus cultivars. A large number of progeny trees of important cultivars of lemon, mandarin, grape fruit and sweet orange have been planted to serve as source of virus-free budwood for further propagation and distribution.

In Vegetables, some of the varieties like ‘Punjab Chhuhara of tomato and Punjab Sunehri of muskmelon have not only been adopted throghout the country but also have received recognition in foreign countries. A large number of varieties have been identified at national level in Muskmelon, Tomato. Pea, Cauliflower and Egg plant. All these varieties have changed the pattern of vegetable cultivation in the state to make this profession more profitable particularly for small farmers.

The University has made significant contribution in developing the animal husbandry programme of the state by providing technical knowhow in the discipline of animal breeding, animal physiology, production physiology, animal nutrition and forage development programme. The University has developed a buffalo herd with an average lactation (305 days) yield of 2200 litres. Sixty buffaloes of this herd have lactation yield of 3000 litres.

One of the buffaloes of this herd has crossed a lactation yield of 4100 litres whereas another has given a peak yield of 23 litres per day. The outstanding buffalo bulls from the elite buffalo herd of the University are provided to the various Artificial Insemination Centres of the Punjab State.

Similarly the crossbred cow herd of the University has a lactation yield of more than 4500 litres whereas one of the Red dane x Sahiwal Cross bred cow No. 110 has held a national record of 51 litres per day and 7300 litres lactation yield. The semen of the outstanding bull of this herd alongwith the bull calves are also provided to the Animal Husbandry Department of the State for improving local cow herd.

The University has also done outstanding work in producing the poultry strains for egg production and for broilers. One of the broilers strain of the University have been approved at the national level and the parent stock of the same is being provided to the various hatcheries of the State for providing the chicks to the Punjab Poultry Farmers.

A significant work has been done on the control of weeds, soil and water management, pest and disease control and development of farm machinery.

The introduction of high-yielding dwarf/semi-dwarf wheat and rice varieties, responsive to high fertilizer and irigation made the conditions favourable for the spread of grassy weeds, notably Phalaris and wild oats in wheat and barnyard grass in transplanted rice. The traditional method of weeding could not check these weeds. Recommendations have been made for the use of selective herbicides to give effective control of these weeds with substantial increase in grain yield.

Crops and fruit plants in the Punjab are attacked by about 200 species of insect pests and mites. Out of these about 2 dozen are of major importance. Spray schedules have been developed and widely followed for the control of the various pests. Economic threshold values were worked out and the use of supervised control was popularized for much major crops, such as, cotton, maize, oilseeds, fruits and vegetables.

To overcome incidence of plant diseases, techniques have been standardized for maintaining obligate parasites, such as, powdery mildew, downy mildew and rusts under laboratory conditions and for quick screening of germplasm of wheat, maize bajra, peas, cowpeas, raya, muskmelon and tomato against their important pathogens. In addition, chemical and other control measures have been worked out against important diseases infecting field and horticultural crops. Chemicals, such as, Vitavax, Bavistin and Benlate were recommended to control loose smut of wheat.

**Vice-Chancellor, Punjab Agricultural University, Ludhiana.*

Intensive cropping and use of high analysis fertilizer, have accentuated the deficiencies of micronutrients in the State. To overcome these micronutrient deficiencies, technology for balanced fertilization coupled with appropriate soil management practices have been formulated for adoption by the farmers. Water is a costly input in agriculture. In order to increase onfarm utilization, efficiency of available irrigation water, optimum irrigation schedules have been formulated for different crops.

A lot of useful research has been done in Agricultural Engineering. The mechanisation is necessary in view of high intensity of crop and raising cost of inputs. The successful use of new technology requires that the fields should be prepared properly at right time, improved seeds, fertilizers and chemical should be placed in correct time at appropriate place and in recommended amount. Harvesting threshing as well as transport of the crop must be performed timely and efficiently to clear field for sowing next crop as well as for avoiding losses due to vagaries of weather etc. Agricultural Engineers of University have not only helped in speed up the mechanisation of major farm operations but also in solving post harvest problems like storage, marketing processing and utilisation of agricultural wastes.

Thus Punjab Agricultural University will continue to shoulder added responsibility to generate new technology through research in all agricultural sciences suitable for the uplift of rural Punjab.

Extension Service

The University is quick in disseminating technical knowledge among the farwers through its Directorate of Extension Education. The University's extension service maintains live and intimate links with the research departments on the one hand and the field-level functionaries and farmers on the other. New farm practices reach the farmers soon after they are evolved by the research scientists. This factor partly, explains why the per hectare yields in Punjab are almost double the naional average yields of most of the crops, such as wheat, rice, bajra and cotton.

It is for the first time in recent history of the country that the farm experts have gained respectability in the eyes of the farmers. The farmers have come to realise that in order to use modern technology effectively they have to depend on the farm experts. That is why the number of farmers enrolling in the various training programmes here is ever on the increase.

The Directorate of Extension Education undertakes the dissemination of new knowledge through the three wings of Extension Training Unit, Farm Advisory Service and the Communication Centre. The efforts of extension training unit have been acknowledged by the United Nations as in no other institution in the world have such a large number of farmers been trained.

Specialised training courses in farm machinery, poultry farming, piggery, fruit and vegetable growing and preservation etc. are organized for the farmers. Correspondence courses for farmers and farm ladies are also organised for the benefit of rural people. Besides these courses, the University runs nonformal education and training programmes which benefit thousands of farmers every year. Through its farm advisory services located in the districts, it tries to reach the farmers to give them latest agricultural technology at their door steps. This service also provides the feedback to the University on the problems of the farmers.

The University is a pioneer in organising Kisan Melas (Farmers' Fairs). These events which are held twice every year have high educational value for the farmers. They visit the University on these days to acquaint themselves with the latest advances in technology and to discuss their farm problems with the experts. During the last 22 years, more than three lakh farmers have visited the University on these days. Under the Farmers' Exchange Training Programme sponsored jointly by the Government of India and the respective State Governments, farmers from Bihar, Assam and Orissa have visited this University to receive practical training in the improved methods of cultivation of wheat and rice crops. These farmers were deputed to stay and work for a few days with farming families in the village so that they could obtain first hand knowledge of the Punjab agriculture.

Impressed by the work of extension organisation of the University, Dr. Douglas Ensminger, Professor of Rural Sociology, University of Missouri remarked:

> "One may ask how this miracle of food production in the Punjab came about? The answer is to be found here within the Punjab Agricultural University.
>
> It was from the research of scientists that made the high production possible and it was from the extension specialists of this University that the technology was field-tested and package of practices were recommended at the district level to the extension staff for farm adoption.

In Punjab the losses in farm production due to weather are very high. For example, in March when the wheat is at a very critical stage, the weather is highly variable. If farmers are informed two or three days in advance about anticipated heavy rainfall and strong surface winds and advised to withhold the irrigation, it can save the wheat crop from lodging and consequent damage. Similarly, if in April, the farmers are informed about the coming dust or thunder storms a day for a few hours in advance, the farmers can withhold the harvesting operations and collect the harvested crop to save it from being blown away.

Fertilisers, insecticides, herbicides worth lakhs of rupees can be saved if the farmers are informed that the coming weather will not be favourable for their application and these will be washed away. The University has started a service called "Weather outlook for the farmers". To give this service to the farmers the University has installed a machine called "Facsimile Weather Chart Receiver". It receives weather charts transmitted through radio signals from Delhi and surrounding international meteorological centres at Tokyo, Nairobi and Tashkent. The PAU is the first Agricultural University in India to start the Department of Agricultural Meteorology and to give a lead in providing the weekly weather advisory service to the farmers through daily newspapers, radio and television.

The University holds field days on the farm of the farmers for different crops, fruits and vegetables. The farmers participate in these field days in large number and learn more about farming through observations and discussion.

The University keeps close liaison with the State Department of Agriculture and publishes its Package of Practices for Kharif and Rabi crops after thorough indepth discussions with the officers concerned of the Department of Agriculture at workshop called Agricultural Officers' Workshops.

The University scientists arrange adaptive trials at farmers' fields of the University's findings. They also lay out demonstration plots in villages for the farmers to see how they can improve up on their present practices.

Apart from its advisory service in the districts, the University has research centres located in different regions for research on crops for which they are best suited. Research on sugarcane, for instance, is done at Jullundur, on rice at Kapurthala and on groundnut at Samrala. Different fruit crops are researched at Gurdaspur. Abohar and Gangian in Hoshiarpur district. Kisan Melas are also held at these research centres in order to pass on to the farmers the technology developed there.

Under the Lab-to-Land Programme, the University adopted 4000 families, mostly small, marginal and landless. The main objective of this programme is to bring the scientists and farmers together in the fields and laboratories. The teams of scientists in various desciplines transfer latest farm technology to the families enabling them to improve production of crops, fruits, vegetables, poultry and milk and thus generating additional income for improving their standard of living.

The University experts in collaboration with the State Department of Agriculture arrange the training camps at the district and block levels to acquaint the farmers with the up-to-date package of practices for the cultivation of Kharif and Rabi crops.

The Communication Wing of the University serves a bridge between the scientists and the farmers through the press, radio, TV and University publications.

In short, the University tries to embrace the whole of the peasantry in its system of transferring new technology evolved at the University. This role must be strengthened in the years to come to hasten the transfer of technology through farm advisory service, training and communication concerning all aspects of agriculture to bring about overall improvement in the living conditions of rural people. The University derives its main sustenance from the fact that it is loved by the farmers in the true sense of that word. Its present standing is the result of dedicated scientists of the University, a committed administration and hard working Punjab farmers. □

[*Courtesy* : The Tribune]

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Smt. Sarla Grewal Addresses Convocation of Dayalbagh Educational Institute

Excerpts from the convocation address delivered by Smt. Sarla Grewal, Secretary to the Government of India, Ministry of Education and Culture at the Dayalbagh Educational Institute on March 3, 1984.

Convocation

...In India, degrees can be awarded only by Central Universities, State Universities, institutions like IITs, which are declared as institutions of national importance and by institutions deemed to be universities. While other categories of institutions are statutory organisations, a deemed University is so declared by a notification. We should appreciate the background of having this mechanism of deemed Universities which in some respect is a major innovation in the field of higher education in our country. when the British Government decided to introduce modern education in India, this brought about a sea-change on the educational scene. Modern education not only meant a new curriculum based on the latest knowledge in various fields but it also meant adoption of a western value system. Not only were traditional Indian institutions neglected and suffered a decline, the traditional Indian values were also replaced by western values. It is in this background that some public spirited persons with a patriotic zeal started the movement of what is called 'National Education'. The movement for starting institutions of National Education which normally had regional languages as the medium of instruction and in which the modern knowledge was combined with inculcation of Indian value system, became part of the broader freedom movement. Some of these institutions became well-known not only for their nationalistically oriented education but also for specialisation in new areas like adult education, science education, etc. Dayalbagh is engaged in carrying out significant broad-based educational experiment by providing an academic atmosphere in agricultural, rural, industrial complex, oriented to specific conditions and needs and providing suitable social services, work experience, national integration and vocational training programmes along with academic curriculum. The system of education aims at excellence without jeopardising relevance, it inculcates the dignity of manual labour, encourages initiative and creative work. It has an inter-disciplinary approach and it aims at building up an integrated personality of a well adjusted man.

I am very happy to see that the trust reposed in Dayalbagh experiment appears to be gradually vindicated by the work done by the Institute. I congratulate the Management, the Director, the staff and the students for their excellent performance. The whole of this morning I have not felt tired because I saw with my own eyes what work love can produce and what manner of dedication there exists on this campus.

Let us look at the larger picture within which your work fits. Humanity stands today at a critical stage of development, where alternate courses of the future stand in an extremely delicate balance. The most desirable courses towards the future is that of universal peace, and of utilisation of our expanding scientific and technological knowledge for building up a more prosperous and more glorious civilisation. And if this has to be realised, our task will be to build the bridges between the past and the future and to ensure the right rhythms of acceleration and human progress. At no juncture of history, this task was as difficult and perplexing as it is today. But precisely for that reason, the time is now most opportune to undertake a serious exploration of the concrete steps that can be taken to strengthen the instrumentality of education. It is in this context, therefore, that I should like to underline the significance of the work that your Institute aims to accomplish.

Your Institute is an institute deemed to be a University, and University, as the very word suggests, is a laboratory of ideas relating to the universe. Man and his relationship with the universe, sciences and arts which promote a harmonious relationship between man and the universe, crafts and technologies that promote the efficiency and prosperity of all, and philosophical, ethical and spiritual adventure that enables man to reduce to the vanishing-point the unknowability of what presents itself as the unknowable not only in man and the universe, but even beyond these two-terms, — these should be the primary concern of the universities and these should be the pursuits in which, ideally speaking, students and teachers in universities should devotedly be engaged. The deplorable distance between this ideal and the actualities that you find in our universities gives us the measure of the work that lies ahead of us.

University education is gripped with serious maladies, and we are called upon to find effective remedies and to reconstruct the damaged edifice or to create a new edifice altogether. One of the serious problems that the universities confront is that of an increasing and unbearable demand for admissions. There is also the problem of providing trained personnel, facilities and equipment for raising the standard and quality of education. There is also the harassing problem of violence and indiscipline in several campuses of universities. And one is appalled to witness the terrible phenomenon of large-scale cheating in examinations. As far as the authorities of the universities are concerned, there is a delicate and tenuous problem of the constitutions of universities under which these authorities find themselves too crippled to deal effectively with the problems they are expected to handle. And, perhaps, the most important problem is that of relating the educated youth to the world of employment, of work, of creativity, and of some possible fulfilment. I have mentioned this about the atmosphere prevailing in the other universities but I don't think it can be applied here, because when I was having a chat with Mrs. Sherry on my way from the Air Port she said that on her campus there is complete harmony between teachers and students and the everybody is completely unmindful and unconcerned of about what happens outside. So this is very salutary thing and I would recommend that other campuses should follow suit. And if you analyse this problem of the relationship between the youth and education, we find that our fault lies in the fact that we consider books more important than the youth, and we regard syllabi to be more imperative than the needs of young minds and hearts to learn the art of thinking, feeling and living. More than 30 years ago, what Einstein said by way of indictment of our educational system remains unfortunately true even today. He had said:

> "One should never cram young minds with facts, names and formulae. To know them you have no need of university courses, you can find them in books. Education should only be used to teach young people to think and to give them this training which no textbooks can replace. It is really miraculous that modern education has not completely suffocated the sacred curiosity of research. I believe that one could even cure a wild beast of its voracity if, under the threat of a whip, it was constantly made to eat when it was not hungry and above all if one selected the food one forced it to swallow".

The fundamental tasks of universities would, in the context of the present day needs, be to provide for a new dimension that underlines not merely the *horizontal* progression of man but also a *vertical* progression of man. What is natural and adequate for a *narrow* development of a man is to give place to what is natural and adequate for the development of a wider and integral development of man. Not only do we need to develop knowledge but we need also to foster even progressive wisdom. Our aim has to be not only to develop the capacities of personality but also to develop values corresponding to these capacities—rational, aesthetic, ethical and spiritual. And, finally, we must train a manpower capable of social and political engineering that aims at regenerating the life not merely of a *few* but of *all*.

Our age has been called the age of machines, and the poignant question before us is whether we should permit man to be dwarfed by machines. Indeed, we must note that the society which lives by machines and not by men declines inevitably towards greed, fear and ultimate ruin. We should, therefore, promote studies and research into ways and means by which man can establish and sustain his sovereignty over machines. As a matter of fact, the human crisis of which we speak today is a result of imbalance between the overwhelming mechanical superstructure of organisation, on the one hand, and relatively inadequate development of man's inner potentialities on the other. It is in the context of this imbalance that universities should address themselves to the task of fashioning young men and women, who can balance the equations of the external and internal realities of life. I am happy that your Institute is dedicated to fashion such young men and women.

I also wish to invite attention to a new chapter which was introduced in our constitution through a constitutional amendment in 1976 i.e. the Chapter on Fundamental Duties. If we consider various components of this Chapter, it will be seen that they provide a charter of educational institutions of a model curriculum which will be value-oriented and which will also make education relevant to the needs and aspirations of the country.

Our Prime Minister has repeatedly emphasised the need for making education value-oriented and the importance of freedum struggle, population education, culture education, environmental education. What is necessary is to see that this work relating to introduction of value orientation and enrichment of curriculum spreads to the largest possible number of institutions so that national integration and excellence are promoted.

The programmes of education need to be integrated with the development process. The linkages between education and development should be beneficial. At present, however, there is a feeling that educational system is turning out Matriculates and graduates who are ill-equipped for the tasks of the real world. The aims and objects of education go beyond making the children fit for the job market. However, the educational system should not neglect the need for ensuring that its products possess requisite skills which enable the educated manpower to get smoothly absorbed in the productive activities of the Nation. The hankering after the degrees merely for getting a job needs to be curbed. It is in this context the Central Government attaches a very great importance to the scheme of vocationalisation of the higher education stage as part of the introduction of the national pattern of education i.e. 10+2+3. The vocationalisation of education presupposes a careful district-wise survey of the job market, identification of the skills in demand and revision of the curriculum so as to make skill based vocational courses an integral part of the syllabus of the +2 stage. At the same time care has to be taken to see that these boys and girls who want to pursue higher education are enabled to do so. Some States like Tamil Nadu and Maharashtra have a well thought out programme of vocationalisation of higher secondary stage. Other States need to follow suit. Central Government has recently formed a high powered Central Vocational Education Board and all aspects of vocational education including recognition of vocational courses which are part of higher secondary stage for purposes of apprenticeship scheme, are being looked into by this Board.

So far as higher education is concerned, our aim is to widen the access consistently with maintenance of standards. For this purpose introduction of innovative programmes of distance education to supplement the correspondence courses already in vogue is being thought of. It is also necessary that the universities adopt the three-year pattern of degree courses and follow the UGC guidelines relating to restructuring of degree courses which envisage three components of foundation courses i.e. core courses and application oriented course with employment potential. Involvement of youth in programmes of adult education is an integral part of 20-point programme and I am happy to see that here again this campus makes full use of the students and the teachers for giving their services in this direction. It is necessary that maximum number of universities and colleges avail of the assistance being given by UGC for adult education, extension education and continuing education and make this programme a success. At the post-graduate and research level, the emphasis will have to be on excellence and quality.

These are national goals and programmes and therefore it is the responsibility of all sections of the community to make maximum effort to achieve the same. Universities and colleges and especially the young people are required to be fully involved in these nation building programmes. While the work being done by your Institute by way of participation in rural development and adult education is commendable, more is expected from institutions like yours not only by way of actual involvement but also by way of suggestion of feasible strategies and well thought out schemes which can be considered and adopted by the Government for wider application.

Finally, I take this opportunity for congratulating the boys and girls who have received their degrees today. No doubt they are a fortunate lot because they have gone through a unique innovative process of education. I have also no doubt that along with the disciplined pursuit of their distinguished careers, they will also participate in the economic process. They should count their blessings and try to spread the illumination which they have received, to the farthest corner of the country. And here I want to repeat that while I noticed that a large number of girls have got away with prizes and are ahead of the boys, the lot of the girls in this country is not so good as the boys. If we look at the female literacy rate, the rates are very very inadequate and why we have not been yet able to universalise elementary education despite the fact that we promised to ourselves in the constitution several years ago, is because parents and society have not given adequate attention to girls education. Girls have been made to work at home, help out the children and their education is not considered of any fundamental importance. If you look at the figures, we are still very far behind. Now under the 20-point programmes, we are saying that by 1990 we shall be able to achieve universalisation of elementary education i.e. upto class VIII, everybody will be in the school. Everybody will not be in school till our girls are in school. And the girls are very very far behind and therefore I would earnestly appeal to institutions of the type, where I am today to lend a helping hand. They have got experience of social service, they have got ways and means of involving volunteers into this programme because we have to educate our girls fast whether they are young mothers or grown up women, whether they are little girls or those who have not gone into matrimony. All of them have to be brought in and then only really human resources can be developed. After all what is economic progress? This progress is meant for the human beings. A human being is not considered enlightened or developed, if he or she is not educated enough—the light is not there. So if we want to wipe out the area of darkness, bring light into everybody's home then let us resolve that we will try to teach each girl. If each one of us tries and teaches one girl, one woman, we can move a step forward, and I am using this forum to appeal to this organisation to take up more and more schemes of adult education and female literacy. And from the Central Government, schemes have been evolved whereby greater assistance to states and voluntary organisations are now being given for non-formal education of girls. For the formal system as well as adult education, I am quite sure these young girls and boys will take it up as a part of their programme after they have completed their education here. They should use their experience gained here in this campus to spread far and wide the spirit of service and that is the only sacrifice and the only gift they will be giving to this institution and the reward which they are expected to give of their services. Then alone all of you will be regarded as worthy alumni of this illustrious institution..." □

IIPA Organises Workshop on Policy Formulation for Development and the Environment

A Workshop on 'Policy Formulation for Development and the Environment', sponsored by the Department of Environment, Government of India, was organised by the Indian Institute of Public Administration, New Delhi from 2nd to 8th February, 1984 with the explicit objectives of discussing and formulating the optimum policy options for the management of our natural resources in terms of our developmental objectives and strategies.

Thirty five administrators, academics and environmental activists attended this 6-day workshop and after due deliberations came up with a number of recommendations.

On wild life conservation, the workshop recommended that the government urgently bring out a document properly embodying the policy of the government as regards wild life conservation formulated in consultation with experts from all the concerned areas and containing a clear statement of priorities in terms of the conflict areas which emerge while undertaking wild life conservation.

With the recent publication of the Wildlife Action Plan by the Department of Environment, at least *prima facie* the need for a document embodying the policy of the Government regarding wildlife conservation seems to be satisfied. Ongoing discussion of the plan, and its implementation will perhaps make clear whether it is adequate in all respects. It recommended that the government should adopt an ecosystem approach to the conservation of wild life.

A more effective census mechanism should be built up whereby authentic data could be made available to allow the making of rational decisions concerning wild life conservation, it was also recommended besides, stressing the necessity for wild life research, education and access to data and to decentralise the organisation of research, training and education and the availability of data so that the people in the field could better utilise the facilities.

On People's Participation in Enviromental Management, the participants noted with concern that many environmental control laws, especially the water pollution and air pollution acts, did not give *locus standi* to individuals or to groups of people directly affected by such pollution. It therefore recommended that these laws should be suitably modified to give *locus standi* to any organization, or group, which directly represented the individuals affected by such pollution. Furthermore, it recommended that programmes in environmental education be rapidly stepped up to cover all segments of the society.

It was also recommended that people's opinions should be solicited only after various possible options have been worked out in detail, so that they are not forced to make an unintelligent choice because of their own poverty. It was recommended that people's cells should be set-up wherever a proposed project, that has significant environmental impact, is being planned.

On Health, Quality of Life and Urban Environments; the participants noting the appalling sanitation conditions existing in most of our cities recommended that the government sanctions funds separately for water and sanitation. It was recommended that pollution levels should also be looked at for areas/regions as a whole, and wherever required shifting/curtailing of polluting activities should be undertaken.

It was recommended that stricter laws and guidelines, banning the conversion of green areas for any other use should be implemented and that the planting of green areas should be done scientifically, in keeping with the latest research showing which species were beneficial for what types of pollution.

The participants recommended the formulation of regional plans, and not just city/town plans, for all major and growing urban areas.

It recommended recycling municipal waste, as this would not only solve, to a great extent, the health problems posed by such waste, but offer an alternate source of energy. The experiences of Shanghai, in China, were specially recommended in this respect.

It was strongly recommended that, by law, adequate preventive and curative health facilities should be made available wherever activities significantly affecting the environment, and consequently the health of the people are set up.

On Environmental Laws, it recommended that all projects/industries having an environmental impact should be required by law to seek environmental clearance before they got approval and before any significant expenditure was incurred; and that this should be applicable to the centre and to all state governments. It recommended that a task force to look into environmental laws and legislations be urgently set up and that an effective legal cell be created at the Centre and in all the States. It recommended that the government, by law, allow affected/interested persons to examine all relevant information and data regarding the environment and regarding proposed projects anticipated to have an environmental impact.

The participants also felt that the prevailing tendency to consider legislation as the answer to all environmental problems was neither desirable nor effective. It was recommended that environmental problems be demarcated into two different sets, one being of those created by individuals or small groups of people who were financially and/or otherwise powerful and disregarded environmental safeguards in order to maximize their returns. For such problems, very strict and stringent legal measures must be adopted and implemented with great vigour.

On Energy and Environment, it was recommended that all environmental impact assessments should contain an energy component to evaluate the cost/benefit in terms of energy gained and energy lost. The participants noted with concern that the government still did not have a fuel energy policy, despite the fact that in India this was the single largest use of energy. It was recommended that the government urgently examine and formulate as quickly as possible a fuel energy policy.

It was recommended that much greater stress needs to be given to energy-efficient technology, especially to technology useful in rural areas and among the urban poor. Noting that various studies have shown the co-relation between family-wise energy availability and the ownership of land and live-stock, it was recommended that in designing the fuel energy policy, this factor should be taken into consideration and it should be recognised that one way of solving the rural energy crisis was by making it possible for more families to own land and livestock.

The participants felt that most policies concerning energy in the country to-day seemed primarily to look at the production of energy. It was, therefore, recommended that policy documents must, in order to be realistic, more carefully look at the many problems involved in the equitable distribution of energy. It was also recommended that much greater stress should be given to the research and development of alternate sources of energy, including that of solar energy.

It was recommended that the government take note of the current tendency to indiscriminately replace animal and human energy, through technology, by fossil and/or other sources of energy and formulate a policy by which animal/human forms of energy were not displaced indiscriminately.

On Land and Water Management undertaking detailed surveys to build-up the data, and draw up maps, regarding land and water resources, especially in terms of use and current status in which non-governmental organizations we also involved to ensure greater authenticity was recommended.

In this connection setting up a data bank for land and water in all state governments directly under the control of the Chief Secretary was recommended.

It was also recommended that each state government form a land and water management board to clear all proposals regarding land and water use before they are given clearance by the government.

It recommended that the government re-examine its land reforms policy, in order to make it implementable. For, without appropriate land reforms, it would be impossible to ensure the quality of our land resources.

It was recommended that, for all dams, the government should specify in advance the priorities for the use of water, so that subsequent pressures do not distort the anticipated benefits from the dam water.

On Forests, taking note of the rapid deterioration of forest resources, both due to industrial and commercial pressures and due to the needs of the poor people living in and around these forests, it was recommended that our industrial policy should impose severe restrictions on the growth of industries based on various forest products. The export of forest based products should be banned.

The participants recommended the setting up of a separate central ministry for forests, and of a coordination committee which has as members the ministers for forest, energy, irrigation, agriculture and environment, to be headed by the Prime Minister.

It was recommended that plantations in natural forest areas should be banned as these seriously disrupted the ecologcal and social functions of the forest.

On Environmental Education & Training the participants recommended organizing of a large number of training programmes for public servants, and felt that such training should be made mandatory for those who were to hold responsibilities directly relating to the environment.

The participants recommended the creation of a Centre for Environmental Education, perhaps at the IIPA, which could make a master plan for the environmental education needs of the country and become involved in designing and promoting environmental education programmes. The participants recommended training in environment for school and college teachers, and the inclusion of topics on environment in school textbooks.

It was also recommended that job opportunities should be created in areas related to environmental manggement to give incentive to people to seriously work in this area.

It was recommended that the civil sercices examinations should have environment as a compulsory segment to enable our young civil servants to become aware of such issues.

It was recommended that environment laws should become a part of the study in law schools so that a cadre of environmental lawyers can be built up.

It was recommended that suitable techniques of environmental impact assessment must be developed in our country and training in this technique given to various segments of our society, including administrators, academics & activists. Perhaps the IIPA could take up this work. It was strongly recommended that environmental impact assessments should also be done of our policies and not only of specific projects, as is the present practice. It was recommended that devices needed for pollution control and for other environmental activities should be indigenously manufactured and made available cheaply. □

Self Employment Week at Osmania Varsity

Mr. T.L. Sankar, Secretary, Industries and Commerce, said new vocational courses should be started for those who completed SSC or Plus-two stage to promote self-employment scheme. He said a Diploma in Industry and Small Scale Business Management could be started exposing the candidates to various aspects like raw material, marketing, tax laws and finances. He said this would promote confidence among the young to take up self-employment ventures. Mr. Sankar was inagurating "Self-Employment Week" organised by the University Employment Information and Guidance Bureau, Osmania University recently.

He further said there were many barriers to self-employment schemes. He said the Government was concentrating on 18 to 35 age group who were the least motivated for self-employment as they did not have the required experience. He said young men continued to study after they complete their SSC or Intermediate as they were too young for jobs.

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, who presided said that the Government organisations dealing with self-employment took no follow up action leaving many in distress. He said because of this, many private organisations were being formed to help those who were returning from gulf. He said many prefer white collar and salaried jobs to self-employment to avoid risks.

Mr. S. Anwar, Director, Employment and Training, said they were planning to take up a special study on status of engineering graduates in the State. He said there was no feedback available with the guidance bureau about the candidates who sought information and help for studies and other ventures.

Dr. M.A. Aleem, Chief of the University Employment Information and Guidance Bureau, said 35 candidates were getting loans from the banks ranging from 25,000 to Rs. 3 lakhs.

Symposium on forensic biology and serology at Punjabi University

Dr S.S. Johl, Vice-Chancellor Punjabi University, Patiala, while inaugurating recently a two-day symposium on "Forensic Biology and Serology" stated that he would endeavour to strengthen the department of forensic science at the university. He promised to "convince" the state government for some help to expand this department.

Dr Johl while describing forensic science as multi-disciplinary and a composite subject, placed for an integrated approach by involving experts from outside. He also urged for conducting refresher courses to sharpen the knowledge of the students who aspire to be forensic science experts.

Dr Johl observed that the development of this branch of science was the need of the time as "this was the most reliable scientific approach in the investigation of a crime."

In his keynote address, Dr B.R. Sharma, Director, Central Forensic Science Laboratory, Chandigarh, said more than 95 per cent of the criminals are acquitted due to lack of some strong evidences. The evidences provided by the forensic science experts in a criminal investigation case are most dependable, he added.

Sixteen papers on different topics were read during the symposium. Some of the important topics included "indentification of menstrual blood stains by polyacrylamidegel electrophoresis", "seminal stain on water immersed cloth", "extraction from dried bloodstains", "serological identification of human milk stains", "non penetrating traumatic rupture of heart", "forensic analysis of food poisoning cases", identification of semen stains", "blood groups from dried muscles", "effects of washing on dried blood stains" and "murder pattern in north west Punjab."

Seminar on Indian Novel in English

A two-day seminar on Indian Novel in English was organised by Shri Shivaji College of Arts, Science & Commerce, Parbhani, Maharashtra. Inaugurating the seminar Dr. G.S. Amur, Professor and Head, Dept. of English, Marathwada University, emphasised the need to study Indian writers in English at the undergraduate level as the corpus of Indo-Anglian creative writing has now achieved a stature comparable to that of any other literature in the world. Besides, he underlined the necessity of introducing Indo-Anglian texts for detailed study at all post-secondary stages. With texts of high literary value available in all the major Indian languages an attempt has to be made to translate the native works into English. He further advocated the urgent need to make comparative studies of literary texts in regional languages to project to the English knowing readers the recent trends in Indian languages. Dr. O.P. Bhatnagar, Prof. and Head, Dept. of Languages, Vidarbha Mahavidyalaya, Amravati in his keynote address exhorted the teachers of English to inculcate the indigenous native sensibility in the students with the help of the Indo-Anglian writing and creative writing in Indian languages.

The inaugural function was presided over by Shri A.L. Mohan, Principal, Shri Shivaji College, Prabhani. In his presidential speech Shri Mohan deprecated the popular trend among the English teachers of concentrating on the major fiction writers in Indian English like Narayan, Raja Rao and Anand. He advised the teachers of English to explore the possibilities of popularising the minor poets, novelists and essayists. They also contribute to the body of

Indo-Anglian writing. He welcomed writers in English who create an awareness among the readers of the evils of the contemporary society. Dr. V.A. Shahane, Prof. Emeritus, Dept. of English, Osmania University Hyderabad, presented his paper on "Critical Perspectives on Indian Writing in English !".

Dr. O.P. Bhatnagar presented a paper on "Indian political novel". Dr. Mrs. M.K. Shirwadkar read a paper on "Indian writing: Text and Context."

Besides, a dozen lecturers in English from affiliated colleges presented papers on Malgaonkar, Jhabwala, Raja Rao Kamala Markandya and Khushwant Singh.

In his Valedictory address Shri K.R. Shirwadkar, Reader, Dept. of English, Marathwada University suggested to the teachers of English to interpret literature in Indian English with special reference to the social conditions.

The Seminar ended with a poetry reading session where Dr. Bhatnagar and Shri Pachgaonkar read out some of their own poems.

National seminar on ceramic education at BHU

Under the auspices of the Diamond Jubilee Celebrations the National Seminar on Ceramic Education concluded with a panel discussion on 26th Feb. 1984 in the Department of Ceramic Engineering Institute of Technology, Banaras Hindu University. The deliberations of 3-day seminar highlighted the critical importance of ceramic materials in the development of advanced technology.

The keynote speaker Prof. B.N. Sammadar, Principal, College of Ceramic Technology, Calcutta, emphasized that with the traditional courses equal weightage should be given to Electrical & Electronics Ceramics and ceramics for application in nuclear, space and other fields.

Mr. L. Ranganathan, Manager, R&D, Carborandum Universal Ltd. called for increased interaction between the industry and the teaching institution.

Mr. P. Jagannatha Rao, Works Manager, E.I.D. Parry (India) Ltd. stressed on the importance of the role of Ceramic Engineers in the industrial progress of the country.

Prof. Mandal of I.I.T., Bombay quoting figures showed that the requirements of ceramic engineers far exceeds the numbers that are presently graduating from our teaching institutions and called for increased intake of students.

Dr. V.K. Moorthy, Director, Planning Cell, Bhabha Atomic Research Centre while appreciating the curricula of B.H.U. called for the Ceramic Engineers to take more interest in the recent developments of the newer ceramic materials.

As per the recommendations of the panel discussion the Head of the Ceramic Engineering Department Prof. M.D. Narasimhan revealed plans to reorient the curriculum in order to fulfil the requirements of traditional ceramic industry and at the same time meet the emerging challenges of the rapid increase in the use of ceramic materials in the advanced technology.

'Academic Function' at Panjab Varsity

Mr. K. Banerji, Chief Commissioner, Chandigarh, exhorted the students to work hard for the prosperity of the nation. He wanted the younger generation to imbibe noble ideals and work earnestly for the unity and welfare of the country.

Mr. Banerji was presiding over the Academic Function organised by the Panjab University recently to confer degrees, medals and prizes on the campus students.

Mr. Banerji while addressing the students, who obtained degrees, said that the real struggle for life would now begin for them. He was happy to note that the girl-students had bagged more merit positions, medals and prizes than boys. The trend set by the Panjab University for promoting women education was appreciated. He said that it was very encouraging that women were excelling in every sphere of life.

Mr. Banerji gave away Silver Medals to 120 campus students who secured top positions in various university examination. This is the annual feature of Panjab University Student Council to honour campus toppers in Annual University Examinations.

Prof. R.C. Paul, Vice-Chancellor, Panjab University, conferred degrees on 167 students out of which 102 were girls.

Amongst the recipients of degrees of the function, all the three merit positions in M.A. (Physical Education) examination were won by women candidates.

Seminar on skin diseases

A three-day Seminar on Skin Diseases was inaugurated by Dr. G.M. Patel, Ex-Vice Chancellor of the University, at the Gujarat Ayurved University recently.

The Seminar, sponsored by the Institute of Post Graduate Teaching & Research of the Gujarat Ayurved University, was attended by leading Vaidyas, Physicians, Professors & experts from all over India.

In his inaugural speech Dr. Patel said that this was the First Ayurvedic Seminar on Skin Diseases in the country. Emphasising the need for concentrated efforts for research work he said that research was a continuous process and it consumed sufficient time money and energy. Inspite of this, if desired results are not forthcoming one should

Dr. K. Bhattacharya

Dr. Kalidas Bhattacharya, former Vice-Chancellor of Visva Bharati and a noted philosopher died at Santiniketan on March 15, 1984. He was aged 72.

not be disappointed but should chase the efforts vigorously.

Prof. V.J. Thaker, Vice-Chancellor of the University presided over the function. In his speech Prof. Thaker stressed the need to minimise the gap between Modern Science and Ayurveda. He expressed the hope that the Seminar would provide an opportunity to the participants to view the Skin Diseases from different angles and the deliberations would entail beneficial results for the common good.

SV University hosts South Indian History Congress

The Department of History, S.V. University, Tirupati, hosted the Fourth Session of the South Indian History Congress at Tirupati from March 2—4, 1984. Nearly 200 historians participated in the Conference. As many as 80 papers were presented at the four academic sessions—political history, socio-economic history, cultural history and historiography.

The congress was inaugurated by Prof. N. Ramachandraiah, Retired Professor of History, Andhra University. Dr. G.S. Dikshit, Emeritus Professor of History, Karnarak University, Dharwad, who delivered the presidential address, said that South Indian History would benefit greatly by the use of Chinese sources in reconstructing the past. He also advised greater use of literary sources in the different Indian languages to reconstruct South Indian cultural history especially of the Vijayanagar period. He urged the historians to make use of oral history to elicit information about the Freedom Movement when participants of the movement were fortunately alive.

Prof. M.V. Rama Sarma, Vice-Chancellor, Sri Venkateswara University, presiding over the inaugural function, appealed to historians to go into the archaeological and historical findings in recent years in Srikakulam and other areas of Andhra Pradesh which unfortunately could not get the attention it deserved.

IVRI now a 'deemed university'

At a function held on March 15, 1984, at the Indian Veterinary Research Institute, Izatnagar, Rao Birendra Singh, Union Agriculture Minister, declared the Institute to be a 'deemed university'. In his speech the Union Agriculture Minister referred to various research in animals in which the Institute had already distinguished itself. Among other areas, he referred to the outstanding achievements in vaccine production. In particular he referred to the useful diagnostic methods developed for a number of disease epidemics in animals and poultry especially the goat tissue vaccine for rinderpest in cattle and ranikhet disease in poultry.

Dr. O.P. Gautam, Director General of the Indian Council of Agricultural Research, under whose administrative control IVRI functioned, in his welcome address announced that to strengthen research in areas of molecular biology and genetic engineering, ICAR had decided to establish a bio-technology centre at IVRI.

The Institute was originally started in Pune with a donation of a 5½-acre plot by a Parsi philanthropist, Sir Dinshaw Manokji Petit on December 9, 1889. It shifted to Mukteshwar in U.P. in 1893 and to Izatnagar in 1913.

Conference of Indian history & culture society at Chandigarh

Prof. R.C. Paul, Vice-Chancellor, Panjab University, called upon historians and social scientists to trace how, with the passage of time, Indian women lost their high status in the society while inaugurating the Seventh Conference of Indian History & Culture Society at Chandigarh recently. Prof. Paul observed that in the pre-historic nomadic tribal society woman was the nucleus of the family and enjoyed a most cherished status. Her domineering role was superseded by man who organised a new life pattern based on agriculture.

Modern age ushered in a new stage of progress in woman. Education, machine and liberalism had brought about a new society based on relationship between man and woman as equal partners.

Prof. K.S. Lal, President of the Indian History & Culture Society, in his presidential address, said that the problem of national integration in India's history was older than that of secularism. India's geography, climate, food, languages, dresses all divided the people and yet the history had destined this continent to sustain as one country. The only unifying force was our culture.

On this occasion, Prof. R.C. Paul, Vice-Chancellor, also released the following books: (1) Early Muslims in India by Prof. K.S. Lal; (2) Buddhism in East Asia by Prof. D.P. Singal; (3) The Frontiers of Indian Civilisation by Prof. B.B. Lal and Prof. S.P. Gupta.

Later, Mrs. Bimla Paul, wife of the Vice-Chancellor, inaugurated an exhibition organised on the occasion.

Regional course on probation and allied measures

"Increasing juvenile delinquency is a world wide phenomenon", said Sri B.M. Yasavantagol, D.I.G. of Police, Belgaum, while inaugurating the 15-day training course on probation for Social Welfare officers of Karnataka State at the Department of Criminology, Karnatak University. The course was sponsored by the National Institute of Social Defence, Ministry of Social Welfare, New Delhi. He stressed the need of inservice training for professional workers. Dr. D.M. Nanjundappa, Vice-Chancellor, Karnatak University in his presidential address pointed out the importance of social defence programmes.

"Humanitarian approach and self-improvement is essential for the rehabilitation of probationers and released prisoners", said Sri G.T. Iyangar, Station Director, AIR, Dharwad in his valedictory address. Dr. G.S. Bidarkoppa, Head of the Dept. of Social Work, Karnatak University, stressed the importance of public education and public cooperation in the rehabilitation of offenders. Prof. M. Kumarswamy, summarised the whole course and Dr. B.S. Gireppagoudar suggested a 18-point programme for the improvement of the probation system in India.

Seminar on human values

While elaborating the concept and interaction of identities of human values, Dr S.S. Johl, Vice-Chancellor, Punjabi University, Patiala, stressed upon "dreaming realistic dreams" in his presidential address at a seminar on human values, held at the university recently. He urged the faculty members to stand up against the "degradation of values" either by making individual essays or by igniting the "spots" in the younger generation. He supplemented his idea by drawing a relativity graphs between the individual and social values and law by which the society is governed.

In his address, Prof. A.N. Pandeya from I.I.T. Kanpur, said there are no "short cuts" to attain a "transformation" in the society. The teachers and the taught, he said, should have the courage to draw a mental framework to think of distant future. He said only the dedicated and whole time efforts in the pursuit of knowledge and values can prove fruitful.

UGC grants to BHU for B. Tech. in computer science and technology

The University Grants Commission has released recently, the long awaited grants for the introduction of B Tech. course in Computer Science and Technology with an intake of 30 students in the Institute of Technology, Banaras Hindu University.

For the purpose, Academic Staff of 2 Professors, 2 Readers and 4 Lecturers positions are already approved apart from the Technical Staff of three persons for the Computer Science Department. Non-recurring grants of Rs. 9.00 lakhs for the Equipments for Computer Science and Technology Laboratories and Library Books, Journals and Computer Manuals etc. have already been approved.

The Vice-Chancellor, Prof. Iqbal Narain, in his letters of congratulations to the Director of the Institute of Technology, Prof. T.R. Anantharaman, has wished all success for the B. Tech. course in Computer Science and Technology. It also opens for the Institute, its Faculty and its students new vistas of participation in nation-building activities, he added.

New computer system for Delhi Varsity

Delhi University's present IBM 360 Computer system is shortly to be replaced by a new sophisticated computer system at a cost of Rs. 10 million, it was revealed by Dr. Gurbakhsh Singh, Vice-Chancellor of the University while inaugurating a seminar organised by the Delhi University Students Union on 'Relevance of Computers in Education'.

CALENDAR OF EVENTS

Proposed Dates of the Event	Exact title of the Conference/ Seminar/Symposium/ Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/ Officer to be contacted	Remarks
April 3-4, 1984	Seminar on (i) Identification Techniques; (ii) Dynamic Scene Analysis	Academic and Development Activity	Department of Electronics & Communication Engg., Andhra University, Waltair.	Head of the Department of Electronics and Communication Engg.	Dr. B. Chatterjee Professor, Deptt. of Electronics & Electrical Communication Engg., IIT, Kharagpur will be the chief guest.
April 7-8, 1984	Annual Conference of Nagpur University Philosophy Teachers Association	To promote academic activities among the Philosophy Teachers in Nagpur University	Dharampeth Arts, Commerce & M.P. Deo Memorial College, North Ambazari Road, Nagpur	Dr. (Mrs.) Usha Gadkari, Head of the Department of Philosophy, Dharampeth College, Nagpur.	—
April 6-8, 1984	Village Festival on Traditional Theatre forms and Seminar on Performing Arts	To make the theatre students aware of of Traditional theatre forms and their rich variety	School of Drama, University of Calicut, Calicut.	Director, School of Drama of the University	Shri T.N. Jayachandran, Vice-Chancellor, Calicut University will be the chief guest.
May 9-29, 1984	Physics of energy conversion devices	To acquaint college teachers with recent advances in energy conversion methods	Department of Physics; Anna University, Madras.	Dr. S. Natarajan	—

J.B. Thacker Commerce College seminar on 'English in Commerce'

Sponsored by the University Grants Commission, New Delhi a 7-day Seminar-cum-Workshop on 'English in Commerce' for Lecturers in English from Commerce Colleges in the State of Gujarat was held at Shri J.B. Thacker Commerce College, Bhuj from 16 to 22nd January, 1984. In all 32 lecturers from Commerce Colleges of 6 Universities in the State viz. Gujarat University, Saurashtra University, Bhavnagar University, Sardar Patel University, South Gujarat University and S.N.D.T. University participated in the Seminar.

The Faculty for the Seminar included outside experts drawn from the Central Institute of English & Foreign Languages, Hyderabad and H.M. Patel, Institute of English Training & Research, Vallabh Vidyanagar, Prin. V.J. Trivedi, Gujarat University, Prof. V.J. Jadeja, Professor of English, Shri J.B. Thacker Commere College, Bhuj as the local resource person. Shri Subhash Jain was the Director of the Seminar.

The work schedule consisted of lectures, discussion sessions, group work, tutorials, demonstrations and material preparation sessions. By way of preparation prior to the Seminar a note was sent around asking the participants to send lists of problems and difficulties experienced in the teaching of English. A number of them responded by sending suggestions and problems experienced by them which the Faculty had time enough to look through. The work schedule was designed accordingly.

Some of the oustanding problems that were taken up for discussion included the following:
(a) Ambitious syllabuses; (b) Lack of continuity between Higher Secondary and College syllabuses; (c) Difficult and impossible textbooks; (d) Large Classes; 100-150; (e) Examination domination; (f) Gap between syllabus and examination; (g) Motivation factors; (h) Reinforcement opportunities, etc. etc.

During the Seminar the participants and the faculty discussed the major and minor problems and arrived at some useful and practical classroom procedures which could be adopted to the local needs. In addition a lot of theoretical ground was covered in terms of business correspondence, group discussions, business meetings, report writing; drafting, notices/announcements/circulars and minutes of meetings. Some practical ways of handling these in large classes were also worked out through demonstrations lessons given at the Shri J.B. Thacker Commerce College itself.

On an average there were 4 sessions a day, each session roughly being of 1½ hours duration. A fifth session was added invariably everyday in which visiting lecturers drawn from all over the State gave lectures followed by discussion. Among the guest lecturers mention may be made of Shri Kulinchandra Yagnik, Education Secretary to the Government of Gujarat, Shri P.G. Mahadeva of the Times of India, Shri M.K. Mistry of the Indian Express, Professor Malagi Thacker and V.J. Trivedi of Gujarat University. At the valedictory function held on Sunday, the 22nd January 1984 Shri Manoharsinhji Jadeja, Minister of Health & Sports, Gujarat Government gave away the certificates.

English in Commerce makes a set of demands and it was felt we cannot go on and on with the same syllabuses, with the same time-tables, or with the same examination systems. In order to arrive at the changes desired the seminar worked in groups and the seminar made the following recommendations. These recommendations are made with the ardent hope that various agencies, colleges, Boards of Studies, Faculties, Academic Councils, Universities, the Government and the University Grants Commission, realize their urgency and importance and that they take steps towards their implementation.

Recommendations

Part I : Syllabusss, Text-books, Curriculum Design:

1. The Seminar recommended that syllabuses in English be integrated and be a continuum in the spectrum school-college.
2. Since the text-books in use are dull and uninteresting, the Seminar recommends that a Committee consisting of one representative from each of the 6 Universities be appointed to prepare teaching materials for 'English in Commerce' for all the 3 years. These teaching materials should be within the language range of the students and should be supported by workbooks and supplementary readers.
3. Something needs to be done to above problems arising out of Stream B. It is unrealistic to expect that students who have not had English in classes X, XI and XII would in the Third Year Commerce Class attain the same level in English as that of those who have had it. Steps, therefore, be taken to either do away with Stream B or to evolve separate courses, materials and examinations for Stream B students.

Part II : Class work, time, allocation & procedures

1. Any language instruction class in the faculty of Commerce should not have more than 60 students. Instead of 3 lectures and one tutorial (i.e. 3+3) the seminar recommends 6 periods a week in English.
2. Each college should set-up a class library, First Year through Third Year, B. Com.
3. Lecturers in English should be provided typing/cyclostyling facilities and in addition useful A.V. aids like the VCR, cassette recorder be made available.
4. In their English classes pair

work and group work procedures be used in order to facilitate smooth transition from core-language to ESP.

Part III : Assessment, Evaluation

1. A Pass in English (all the 3 classes) be made obligatory and marks obtained in English should be positively taken into account in the award of a class.
2. The practice of awarding grace marks and condoning deficiencies be not only discouraged but discontinued.
3. To prevent abuse of the internal marking system, a system of checks and balances be worked out. The seminar considers internal evaluation as necessary.
4. For number 3 above and to arrive at blue prints of question papers a seminar on evaluation techniques vis-a-vis English in commerce be held as soon as possible. It is expected that at such a seminar alongwith better questions, ways of proparing model answers will also be arrived at.

   These recommendations be considered on a priority basis and it is necessary that a certain uniformity across Universities is arrived at for problems are similar and attainment targets are also similar.

Kidney research centre at Lucknow University

The Governor of Uttar Pradesh who is also the Chancellor of the Lucknow University, it is reported, has sanctioned a sum of Rs. 1.70 lakhs for establishing a Kidney Research Centre in the Zoology Department of the Lucknow University. The State Government, it is reported, is likely to sanction some more funds for the Centre.

M.Lib Sc. course at Srinagar

With effect from this year the University of Kashmir is introducing M.Lib. Science. Course in the Department of Library and Information Science of the University.

DST grants for robotics

Robotics has been identified recently as one of the thrust areas of engineering science at a meeting convened by the Department of Science and Technology.

The Department of Science and Technology has announced research grants to universities and other technical institutions for developing robots to meet production requirements in local industry.

World Bank Project at PAU

The Punjab Agricultural University will soon launch Rs. 6 crore World Bank aided research project to develop new varieties of cotton, oilseeds, pulses and dryland crops.

Amravati University campus

Shri K.G. Deshmukh, Vice-Chancellor, Amravati University, recently stated that the Maharashtra Government had sanctioned 236 hectares of land for the construction of a campus for this newly established university.

The university has 77 colleges affiliated to it including 10 colleges affiliated during the current year.

News from Agril. Varsities

PAU mela concludes

There has been a revolutionary change in agricultural development during the last twenty years which has made extinct the agricultural implements in existence for the last about thirty-five hundred years. This change in agriculture had occurred due to development of new technology and its quick adoption by the Punjab farmers, said Dr. Sukhdev Singh, Vice-Chancellor of the Punjab-Agricultural University at the concluding function held on March 22, 1984 of the 2-day Kisan Mela.

Dr. Sukhdev Singh pointed out that there had been some deterioration in health of both soil and farmer which should be checked by taking up dairying along with crop cultivation, as it would provide farmyard manure for soil and milk for human-beings. He further said that to keep pace with the agricultural development the farmers must acquire latest knowledge through University publications and other mass media. New seeds and other inputs like fertilizer, irrigation without knowledge input would not make much difference in farming, he added.

Dr. Khem Singh Gill, Director of Research told that more than 8000 bags of improved seeds had been distributed to the farmers during the mela days. He advised them to strictly follow the University recommendations and should not be misled by unscrupulous dealers in agricultural inputs.

The Vice-Chancellor, Dr. Sukhdev Singh, on behalf of the University honoured S. Mohinder Singh Sandhu of Pakki Village in Faridkot District by awarding him a plaque and a commendation certificate in recognition of his outstanding contribution and service in the field of horticulture.

HAU develops unique bacterial strain

Researchers at the Haryana Agricultural University (HAU) have developed a unique bacterial strain that helps sereal plants fix nitrogen from the atmosphere.

The new strain of Rhizobium, christened CT-2014 fixes nitrogen in Urad, Moong, Arhar Cowpea and Guar and results in a 15 to 20 per cent increase in their yield. Dr. M.M. Mishra of Microbiology Department said in Hissar that this helps farmers to do away with expensive inorganic nitrogenous fertilisers.

Rhizobium is a soil bacterium which on coming into contact with the roots of a suitable host, invades the roots and forms nodules. The bacterium lives in symbolic association with the host plant, providing atmospheric nitrogen in return for nutrients and protection.

The problem so far has been that rhizobia are specific to each host. The new strain is unique because it is capable of nodulating as many as five hosts effectively, Dr. Mishra said.

Rhizobium supplies to the soil about 30 to 40 kg of nitrogen which otherwise would have to be given through the application of chemical fertilisers, he added.

Another advantage of the bacterium is that the nodules excrete the excess of nitrogen in the soil which is beneficial to the following crop or the adjoining crop in case of mixed cropping.

The Department of Microbiology, the country's largest producer of rhizobia cultures, is now engaged in developing rhizobial strains capable of forming nodules under high temperature and low moisture conditions. It is also making efforts to understand the basis of host specificity and thus develop more strains capable of multi-noduling.

Bougainvillea garden inaugurated at PAU

A 14-acre bougainvillea garden on the Punjab Agricultural University campus was inaugurated recently by Dr. Sukhdev Singh, Vice-Chancellor, Speaking on the occasion, the Vice-Chancellor said cultivation of flowers should be encouraged as it would add to the beauty of the countryside. Referring to the bougainvillea, the Vice-Chancellor said that it was a hardy flowering plant and nobody plucked its flowers. Moreover, it required low-cost management. The Vice-Chancellor cautioned that only pest-resistant and disease-free varieties of this flowering plant should be introduced.

Dr. K.S. Randhawa, Head, Department of Vegetable Crops, Landscaping & Floriculture said that 150 varieties of this flowering plant had been collected and planted in the garden. A training programme is also proposed to be organised in August and a Bougainvillea Show would be held in November. Efforts will be made to popularize this flowering plant in collaboration with the Directorate of Extension Education for the beautification of the rural areas, he added.

It is proposed to produce about 50,000 plants for general distribution in the State.

HAU VC inaugurates annual function of veterinary college

"The Veterinarians has a great role to play in maintaining the ancient image of Haryana when it was famous for its good quali- of livestock as well as in the uplift of economy of the poor ruralites by serving their animals", said Shri L. D. Kataria, Vice-Chancellor, while speaking at the Annual Prize Distribution Function of the College of Veterinary Sciences. In his inaugural address Sh. Kataria asked the young veterinarians to go to the villages and guide the farmers on various aspects of breeding, feeding, management of animals so that losses due to the disease are prevented. He said that since Haryana has nearly 65 lacs of livestock population, we, therefore, need 650-950 veterinarians in Haryana state alone as against the present total strength of 450 veterinarians.

He urged the State Govt. to open more veterinary hospitals so that veterinary services can be intensified in the state and provided more facilities to the veterinarians as their job is more difficult than the medicos. He emphasised the need to train the field veterinarians from time to time that in latest technology so they can be abreast with day to day knowledge.

Earlier the Dean of the College, Dr. L. D. Dhingra reading out the annual report of the college disclosed that this college had the best referral indoor clinics in the country. This clinic, besides treating the animals also has arrangements for free lodging of both the owners and their animal patients.

News from UGC

UGC approves university centres for postgraduate studies at Solapur and Nanded

The University Grants Commission has agreed in principle to the proposals for the establishment of two university centres for Post-graduate studies, one at Solapur under the Shivaji University, Kolhapur and the other at Nanded under the Marathwada University, Aurangabad. These centres will be set up subject to the fulfilment of conditions laid down by the UGC.

The Standing Committee on New Universities and Postgraduate Centres had appointed two different Committees to consider in detail the proposals sent by the respective universities. The Committees visited Solapur and Nanded and made recommendations.

According to the proposals finally agreed to, the post-graduate studies centre at Solapur may be started to begin with in any of the three disciplines from the areas namely, (a) Geosciences with specialisation in Geology, Geophysics, Geochemistry and Oil Exploration, (b) Chemistry (all branches) with specialisation in order of performance in Polymer Chemistry, Synthetic Organic Chemistry, Protein Chemistry and

Petro-Chemistry, (c) Physics with specialisation in Electronics, Space Physics, Astrophysics and Computer Science, (d) Bio-sciences with specialisation in Microbiology and Bio-Chemistry and (e) Computer Science with courses in Statistics.

The proposed Post-graduate Studies University Centre at Nanded could start courses namely M.Sc. (Bio-Technology) M.Sc. (Industrial Chemistry) and Master of Social Work in the Sixth Plan in the first phase and in M.A. (Music), M.A. (Applied Arts: Commercial Arts) and M.Sc. (Polymer Chemistry) in the Seventh Plan in the second phase. Simultaneously, at that stage, this centre could undertake providing facilities in post-graduate diploma courses in Analytical Chemistry, Environmental Chemistry, Pharmaceutical Chemistry, Textile Chemistry, Fermentation and Petro-Chemicals.

UGC to set up a national educational testing unit

The University Grants Commission has decided to set up a 'National Educational Testing Unit which will, in the first phase, hold an examination for the award of Junior Research Fellowships but subsequently, it may develop tests which may be used for qualifying to be selected as university and college lecturers, and for admission at the postgraduate level to central or other participating universities. There may also be tests for selection of undergraduates in various subjects in which induction of talent is felt necessary.

The Commission expects that the development of tests at the national level in the different areas would help overcome the problem of comparability in marks awarded by different universities, increase the reliability and objectively of examinations for the purposes in view in particular, and act as a pace-setter for the improvement of syllabi and methods of teaching/evaluation in the university system, in general.

To start with, the University Grants Commission proposes to hold an examination in July/August, 1984 for selection of candidates for the award of Junior research fellowships at the post-graduate level in science subjects namely Physics, Chemistry, Mathematics, Botany, Zoology and Earth Sciences and in Humanities and Social Sciences i.e. Economics, Political Science, Sociology, Psychology, Philosophy and History. This examination will comprise two papers, first paper will include questions to test reasonable ability, grasp and a broad base of knowledge related to the sphere of learning and second paper will be designed to test grasp and understanding of a core curriculum in the subject concerned as well as in the special field of study. There will be emphasis on testing divergent thinking and the ability to express thoughts in a cogent manner.

The Commission hopes that in a year or so the National Educational Testing Unit will embark on the development of tests in other areas.

Sports News

China bids for XI Asian Games

China is proposing to host the XI Asian Games in Beijing in 1990. A formal application is reported to have been sent by China to the Olympic Council of Asia, which earlier was the Asian Games Federation.

In the Dossiers, sent by China to the Supreme Olympic Council of Asia, certain details are given with regard to China's plans to build a modern Sports Complex in addition to the existing available facilities. They are also proposing to build a Games Village of the kind of Asian Games Village built in Delhi. China's request to bid for the XI Asian Games is supported by the Government of People's Republic of China and promising that they will invite all the delegations from the member countries of the Supreme Olympic Council of Asia including Taiwan. Taiwan, however, will be invited in the name of Chinese Taipei Olympic Committee, in terms of the rules framed by the International Olympic Committee in this behalf.

It is learnt that China is also planning to bid for the Olympic Games of 2000.

Women's manly ambition

A Swiss-based woman Chess player Tataya Lemachko has expressed her ambition to win Men's World Championship. Tataya Lemachko, born in Soviet Union and married to a Bulgarian, believes men and women should be treated as equals in the Chess World. She often plays in Mens' Tournaments and was joint 3rd in the big Lugano Tournament which recently concluded in Switzerland.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

SOCIAL SCIENCES

Journalism

1. Jayan, K.K. *A study of the communication of scientific information in Kerala with special reference to K.S.S.P. and daily newspapers.* U Ker, Trivandrum. Dr. J.V. Vilanilam.

2. Sasibhooshanan Nair, V.S. *A field study of the dissemination of development information in Kerala.* U Ker, Trivandrum. Dr. J.V. Vilanilam.

3. Sasidharan, Rekha M. *The ideal woman and the advertised woman: A study of the influence of foreign advertising.* U Ker, Trivandrum. Dr. J.V. Vilanilam.

Psychology

1. Srivastava, Sudha. *Experimental deprivation effects on retention.* BHU, Varanasi. Dr. C.B. Dwivedi.

Political Science

1. Jain, Tara S. *Political ideas of Lal Bahadur Shastri.* Devi Ahilya, Indore. Dr. Om Nagpal.

Economics

1. Jugale, Vasant Bira. *Socio-economic and technological impact of co-operative credit on agriculture*, Shivaji U, Kolhapur. Dr. J.F. Patil.

2. Nanda Mohan, V. *Capacity utilisation.* U Ker, Trivandrum. Dr. K. Ramachandran Nair.

3. Tharakan, P.K. Michael. *Pre-condition of development in 19th century Tranvancore.* U Ker, Trivandrum. Prof. P.G.K. Panicker.

Education

1. Gurav, Hiroji Krishnaji. *A study of the drop outs and stagnation of the students at college level with special reference to Shivaji University area.* Shivaji U, Kolhapur. Dr. K.S. Gurav.

Commerce

1. Tiwari, Manoj Kumar. *Personnel management in public sector enterprises in Madhya Pradesh : A study of selected aspects of M.P.E.B., Bhilai Steel Plant and State Bank of Indore.* Devi Ahilya, Indore. Dr. M.L. Kothari.

Home Science

1. Sethi, Alka. *Integrating nutrition, education in the curriculum of schools of rural areas.* U Delhi. Dr. (Mrs.) Sushma Sharma.

2. Thapliya, Harinder. *Child rearing practices in Kathamandu.* U Delhi, Dr. S. Anandalakshmy.

HUMANITIES

Philosophy

1. Majumdar, Sarbani. *Problem of reference in upanishadic discourse with special reference to Sankara and Ramanuja.* BHU, Varanasi. Prof. A.K. Chatterjee.

Language & Literature

English

1. Harris, V.C. *Emily Dickinson and Sylvia Plath: A comparative study in poetic sensibility.* U Ker, Trivandrum. Dr. K. Ayyappa Panicker.

2. Usha, V.T. *Ted Hughes: A study of the human and non-human characters in his poetry.* U Ker, Trivandrum. Dr. K. Ayyappa Panicker.

Hindi

1. Balkrishnji, Malu Nirmala. *Babban ke sahitya ka manovaigyanik adhyayan.* Shivaji U, Kolhapur. Dr. S.P. Mali.

2. Mehta, Sujata Prakashchandra. *Shri Anand Prakash Jain: Vyaktitva aur krititva.* Shivaji U, Kolhapur. Dr. P.P. Phatak.

Marathi

1. Kalake, Jayasing Nanasaheb. *Prachin marathi sahityateel samajik jeevanaye chitran: Prarabh te Ekanath poorva kal.* Shivaji U, Kolhapur. Dr. P.N. Kulkarni.

2. Tamagave, Shridhar Dada. *Swatantrayottar kalateel marathi samajik natak.* Shivaji U, Kolhapur. Dr. T.P. Upadhye.

Malayalam

1. Sudha, K.S. *Concept of man in modern malayalam novels.* U Ker, Trivandrum. Dr. P.V. Velayudhan Pillai.

History

1. Chopra, Sarla. *The position of children, aged, sick, physically handicapped in Ancient India.* BHU, Varanasi. Dr. J.N. Tiwari.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Library Science

1. Vohra, Ranjana. *Concept of analytico-synthetic scheme of classification with special reference to Ranganathan, Barbara Kyle, Farradane and Foskett: A study.* Pb U, Chandigarh.

Psychology

1. Dafaria, Asha. *Role conflict as related to role ambiguity job satisfaction and job involvement using some personality factors as moderators.* U, Raj, Jaipur.

2. Kishore, Renu. *A feature analysis of responses to Indian classical music.* U Delhi.

3. Rewal, Veena. *Reinforcement in figure-ground perception: A chronometric study.* U Delhi.

4. Singh, Maharaj. *The role of extra unconditioned stimulus in classical conditioning.* Meerut U.

5. Sivasankara Reddy, K. *Attitudinal differences between the young and the old: A study of generation gap.* SVU, Tirupati.

6. Suraj Bhan. *Development of social behaviour in rhesus monkey (Macaca Mulatta) infants in free ranging habitat.* Meerut U.

7. Tiwari, Geeta. *Construction and standardization of teaching aptitude scale for college teachers.* RDV, Jabalpur.

Sociology

1. Dhabai, Radha Krishan. *Patterns of diversification within a rural economy: A case study of District Bhilwara, Rajasthan.* JNU, Delhi.

2. Dubey, M.C. *Social change in Lasodia and Naplakhedi village in Sehore District.* Bhopal U.

3. Gopinatha Menon, A.G. *Adoption behaviour of small farmers in relation to their attitude towards agricultural innovations.* U Ker, Trivandrum.

4. Jandhyala, Radha Krishna. *The brahmans in Andhra Pradesh : A study in downward social mobility.* Andhra U, Waltair.

5. Lingappa, Hiremath Siddharamesh. *The dimensions of trade union leadership in Karnatak.* Kar U, Dharwad.

6. Sinha, Raghuvir. *Social change in Indian society: A sociological analysis.* Bhopal U.

7. Sinha, Ravindra Kumar. *Alienation among scheduled castes in an urban setting.* Meerut U.

Social Anthropology

1. Konda, Einstein Raj Pramukh. *Harijans and harijan christians of Guntur : A study in social mobility and change.* Andhra U, Waltair.

2. Mohanty, Uma Charan. *From a feudal system to the democratic order : A study of socio-political changes in two Saora villages.* Utkal U, Bhubaneswar.

Social Work

1. Goyal, Ravi Chand. *Personnel management in voluntary hospitals in Delhi.* JMI, Jamianagar.

2. Kapoor, Manindra. *A study of extension education programmes for women with special reference to family life education.* JMI, amianagar.

Political Science

1. Arora, Veena. *Relationship between the Union Government of India and the Jammu and Kashmir State,* 1947-1975. U Delhi.

2. Ghadge, Alka. *Bharatiya lok sabha kee sanrachna evam karya prakriya: Alochnatmak vishleshan,* 1967-1977 *tak.* Vikram U, Ujjain.

3. Jha, Pramod Shankar. *Kshetriya rajnitik vikas : Kahatauli Prakhand ka ek adhyayan.* Meerut U.

4. Rath, Ranjana. *The role of the chief secretary in the administration of the states in India with special reference to Orissa.* Utkal U, Bhubaneswar.

5. Ray, Rina. *India's attitude towards Czechoslovak crisis,* 1968. U Burdwan.

6. Singh, Sukhbir. *Uttar Pradesh mein panchayat nirvachan, vishesh roop se Meerut Janpad ke Vikas Khand Simbhaoli ke sandarbh mein.* Meerut U.

Economics

1. Arneja, Jasbir Singh. *Agricultural taxation in Punjab.* Meerut U.

2. Beohar, Madan Gopal. *Role of co-operative credit in rural development of Jabalpur District.* RDV, Jabalpur.

3. Bhattacharyya, Manasendu. *Wage structure and incentives in Indian coal mines and their impact on productivity and socio-economic conditions.* ISM, Dhanbad.

4. Hari Prakash. *Impact of World Bank Group Assistance on the development of agricultural sector in India.* Meerut U.

5. Juyal, Rajni Kant. *Economics of health services in Western Uttar Pradesh.* Meerut U.

6. Khanna, Om Prakash. *A critical appraisal of nationalised road transport in Punjab.* Meerut U.

7. Mathur, Arvind Kumar. *Growth and development of organised mandies in Rajasthan.* U Raj, Jaipur.

8. Misra, Satish Chandra. *A study of agricultural labour market with special reference to employment, income and living standard of agricultural labourers in Etawah District.* CSAT, Kanpur.

9. Nagar, Nirupma. *Madhya Pradesh ke dakshini paschimi pichhreh kshetron ke krishi vikas mein sansthagat vitt ka yogdan.* Devi Ahilya, Indore.

10. Nownezhad, Masoud. *The role of oil in the economic development of Iran during the period of* 1950-75. JMI, Jamianagar.

11. Paliwal, C.M. *Madhya Pradesh ke adivasiyon ka arthik vikash: Vishesh rup se Bastar Jile ke adivasiyon ke sandarbh mein.* Bhopal U.

12. Pareek, Satya Narain. *An economic analysis of the green revolution in India and its implications for international trade in agriculture.* Meerut U.

13. Sandip Chander Pal. *Ujjain sambhag ke vrihit udyogon mein shram sambandh.* Vikram U, Ujjain.

14. Satpathy, Trilochan. *Irrigation policy in Orissa.* Utkal U, Bhubaneswar.

15. Shinde, Sharada. *Indore Jile kee beemar millon kee arthik samsyaen.* Vikram U, Ujjain.

16. Singh, Baltej. *Working of industrial estates in Punjab.* Meerut U.

17. Sujatha Rao, M. *Economic effects of social stratification in India,* U Delhi.

18. Suryanarayana, Gollu. *Public distribution system in Andhra Pradesh : A case study of Visakhapatnam District.* Andhra U, Waltair.

19. Tripurana, Nirmala Devi. *Prospects for regional economic cooperation in South Asia.* Andhra U, Waltair.

20. Vyas, Narayan. *Yojnakal mein Ujjain Sambhag ke antragat vrihitt evam laghu udyogon ka vikas.* Vikram U, Ujjain.

Law

1. Narender Kumar. *The taxing power of the Union and states and the distribution of revenues in the federal structure of India.* Pb U, Chandigarh.

Public Administration

1. Swinder Singh. *Role of bureaucracy in integrated rural development in Punjab.* Pb U, Chandigarh.

Education

1. Datar, Vandana V. *Development of an achievement test in education psychology for B.Ed. (Marathi medium) students and preparation of a question bank.* SNDT, Bombay.

2. Deshpande, Leena. *A critical study of the nature, scope and effective utilisation of the facilities given to students of B.C. since independence, reaction of students (B.C. and others) and the teaching community of colleges in the city of Poona to the provision of such facilities.* SNDT, Bombay.

3. Dutt, Roma. *A study of social cohesion in elementary teacher training institutions and its relationship with attitude and adjustment of student teachers.* Meerut U.

4. Grover, Swaym Prabha. *Curriculum design for seventh grade physics based upon Piagetian concrete and formal operations and Skinnerian theory of reinforcement.* Pb U, Chandigarh.

5. Jain, Rakesh. *Nonverbal classroom interaction patterns of language, social studies and science teachers.* Meerut U.

6. Kashani, Hassan Agha Touliat. *Factors impeding compulsory elementary education in the Province of Isfahan, Iran.* Pb U.

7. Khanapurkar, Usha. *Construction and standardization of silent reading comprehension test in marathi for the pupils studying in standard VII in the schools in Osmanabad, District of Maharashtra State.* SNDT, Bombay.

8. Panda, Muralidhar. *The relationship of parental life style to intellectual achievement responsibility, adjustment and cognitive performance among under privileged children.* Utkal U, Bhubaneswar.

9. Raghuvanshi, Suresh Kumar Singh. *A study of the role of principals and teachers of colleges affiliated to Meerut University in decision making.* Meerut U.

10. Raj Kumari. *Costs and benefits analysis of college education in the Meerut University.* Meerut U.

11. Ramanjula Reddy, Obul Reddy. *A study of the achievement and intellectual capacity of high school students.* Andhra U, Waltair.

12. Saran Kumari. *A study of behavioural characteristics in relation to ego identity among adolescents.* Pb U, Chandigarh.

13. Shelat, Minakshiben Hiralal. *Impact of reading improvement programme in Gujarati on reading comprehension of class VI of varying intelligence and coming from different sex.* SPU, Vallabh Vidyanagar.

14. Tulsi, Paramjit Kaur. *Differential effect of career guidance strategies on vocational maturity patterns in relation to sex, intelligence and need achievement.* Pb U, Chandigarh.

15. Virmani, Krishan Gopal. *Leadership styles and cognitive ability antecedents as performance correlates of educational leaders : Focus on heads of schools.* IIT, Delhi.

Commerce

1. Brahmanandam, G.N. *A study of financing small scale industry by commercial banks in Guntur District.* Nagarjuna U.

2. Dixit, Ramesh Kumar. *The behaviour of share prices in India.* Pb U, Chandigarh.

3. Goel, Kailash Chand. *Management of working capital : A case study of Star Paper Mills Ltd., Saharanpur.* Meerut U.

4. Narang, Gurnam Das. *Development banking and backward areas.* Pb U, Chandigarh.

5. Rastogi, Rakesh Kumar. *Organisation and management of Mini Steel Plants in Meerut Region, U.P.* Meerut U.

6. Roy, Ashok. *Inventory control and costing in risk assessment in small scale industry with reference to selected units.* SPU, Vallabh Vidyanagar.

7. Satya Raju, Rapaka. *Informal sector in urban labour markets : A case study of shops and establishments in Visakhapatnam.* Andhra U, Waltair.

8. Seth, Vijay Kumar. *Spatial dimension of the process of industrialisation in India since 1950.* U Delhi.

9. Singh, Subas Chandra. *A study of working capital management in the Fertiliser Corporation of India Ltd.* Mag U, Bodh Gaya.

10. Vaidya, Subhash Chand. *Inter-state road passenger transport in India with special reference to Punjab: A study in cost, organisation and operations.* Pb U, Chandigarh.

11. Verma, Manohar Lal. *Export prospects and problems of Indian diamond industry.* Pb U, Chandigarh.

12. Vijay Kumar, V.S. *Organisational and operational trends in the state financial corporations in India with special reference to Andhra Pradesh.* Devi Ahilya, Indore.

Management

1. Jacob, Thangam. *The impact of sterilisation on family relationships.* U Cochin.

2. Kalia, Suman. *Role of foreign capital in the Indian educational planning and management.* U Delhi.

3. Rajan Nair, N. *A study of the evolution and working of regulated markets in Tamil Nadu.* U Cochin.

4. Ramaswamy, V.S. *A study of the marketing of fertilizers in India.* U Cochin.

SHREEMATI NATHIBAI DAMODAR THACKERSEY WOMEN'S UNIVERSITY

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	No. of Posts	Media of Teaching
A. Department of Post-Graduate Studies & Research, SNDT Women's University, Bombay		
1. Professor of Psychology	One	English
2. Reader in Hindi	One	Hindi
3. Reader in History	One	Mar/Guj
4. Lecturer in Hindi	One	Hindi
5. Lecturer in Marathi	One	Marathi
6. Lecturer in Psychology	One	English
7. Research Assistant (For Dept. of Sociology)	One	—
8. Research Associates (For Dept. of Gujarati under Special Assistance)	Three (Temp.)	—
9. Junior Librarian (-do-)	One (Temp.) (Part-time)	—
10. Technician for Casset Centre (-do-)	One (Temp.) (Part-time)	—
11. P.D. Fellow (For Research Project at Dept. of Gujarati)	One	—
B. S.N.D.T. Arts & Smt. Champaben College of Commerce & Economics for Women, Bombay.		
12. Professor/Reader in Commerce	One	English
13. Lecturer in Commerce	One	English
14. Lecturer in Politics (Re-advertised-II)	One*	Marathi
15. Lecturer in Geography (Re-advertised II)	One*	Gujarati
16. Lecturer in Art & Painting (Re-advertised-II)	One*	Eng/Mar.
17. P.T. Instructress	One (Part-time)	Mar/Guj.
C. S.N.D.T. Arts & Commerce College for Women, Pune.		
18. Lecturer in Marathi	One	Marathi
D. P.V.D.T. College of Education for Women, Bombay.		
19. Lecturer in Education Post No. 1 : With (i) a post-graduate Degree in Education and Science and/or Maths. and (ii) B.Ed. with Science & Maths or Geography or Hindi or Marathi. Post No. 2 : With (i) a post-graduate Degree in Education and History or Hindi and (ii) B.Ed. with History and Hindi. Post No. 3 : With (i) a post-graduate Degree in Education and Marathi and (ii) B.Ed. with Marathi & Geography or History).	Three	Marathi
20. Lecturer in Education (With (i) A post-graduate Degree in Education and Gujarati and (ii) (ii) B.Ed. with Gujarati and Hindi or Geography.)	One	Gujarati
E. S.N.D.T. College of Education for Women, Pune.		
21. Lecturer in Education (For Science, Mathematics Education)	One	Mar/Eng.
22. Lecturer in Education	Two (Part-time)	Mar/Eng.
F. Sir Vithaldas Thackersey College of Home Science, Bombay.		
23. Professor of Child Development	One	English
24. Professor of H.Sc. Extension Education	One	English
25. Professor of Foods & Nutrition	One (Temp.)	English
26. Reader in Family Resource Management	One	English
27. Reader in Textiles & Clothing	One	English
28. Lecturer in Family Resource Management with specialisation in Architecture and Interior Design.	One	English
G. S.N.D.T. College of Home Science, Pune.		
29. Professor of Foods & Nutrition/Food Technology/Child Development/Textiles & Clothing/Costume Design/Family Resource Management (Home Management)/Mass Communication	One	English
30. Lecturer in Family Resource Management	One	Eng/Mar.
31. Lecturer in Textiles & Clothing	One	Eng/Mar.
32. Lecturer in Foods & Nutrition	One	Eng/Mar.

33. Lecturer in Child Development (with B.Sc. HH.Sc. preferably in Child-Development, Master degree in Social Work)	One	Eng/Mar.
34. Lecturer in Psychology	One (Part-time)	Eng/Mar.
35. Lecturer in Physics	One (Part-time)	Eng/Mar.
36. Lecturer in Physiology	One (Part-time)	Eng/Mar.

H. Leelabai Thackersey College of Nursing, Bombay.

37. Reader in Nursing	One	English
38. Lecturer in Nursing (Re-advertised III)	Four 1 post*	English
39. Assistant Lecturer in Nursing	One	English

I. Premlila Vithaldas Polytechnic, Bombay.

40. Lecturer in Microbiology	One	English
41. Lecturer in Commerce	One	English
42. Lecturer in Optometry	One	English
43. Instructor in Optometry	One	English
44. Placement Officer	One	
45. Technical Assistant	One	
46. Laboratory Assistant-cum-Store-Keeper	One	

J. C.U. Shah College of Pharmacy, Juhu, Bombay

47. Professor Pharmaceutical Chemistry/Pharmacology	+One	English
48. Reader in Pharmacy/Pharmacognosy/Pharmaceutics.	One	English
49. Lecturer in Pharmaceutics/Pharmaceutical Chemistry.	+One (Temp.)	

(+Post temporary, but likely to be made permanent)

K. Research Unit on Women's Studies,

SNDT Women's University, Bombay

50. Documentalist (in the Lecturer's Scale)	One

L. Department of Continuing & Adult Education Women's University, Bombay

51. Assistant Director	(Tenure)	One
52. Co-ordinator	(Tenure)	One
53. Project Officer (One for Bhavnagar & One for Pune)	(Tenure)	Two
54. Technical Assistant (Audio-Visual)	(Tenure)	One

M. Other Posts

55. Assistant Director (Dept. of Correspondence Education)	One (Temp.)
56. Deputy Registrar (-do-)	One (Temp.)
57. Assistant Registrar (University)	One (Temp.)
58. Typists (University/College)	(Temporary)
59. Clerks (-do-)	(Temporary)
60. Electrician (Juhu Campus)	One
61. Assistant Civil Engineer (Juhu Campus)	One (Temp.
62. Director of Physical Education (University)	One

Minimum qualifications, salary scales, etc. for the posts of teachers are as per approved U.G.C. Scales & Qualifications. Details should be collected with application forms Applications of Scheduled Castes/tribes/other nomadic tribes, etc. will be considered as per Government Directives. Posts marked with* are reserved for SC/ST/ONT candidates and applications from such candidates only will be entertained.

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CENTRAL INSTITUTE OF ENGLISH AND FOREIGN LANGUAGES

HYDERABAD-500 007

Advertisement No. II/84

Applications on the prescribed form together with the application fee are invited for the following posts in the Institute service so as to reach the undersigned on or before **25-4-1984**.

I. Professors/Senior Fellows

Scale of Pay : Rs. 1500-60-1800-100-2000-125/2-2500.

1. Department of English Literature (one post).
2. Department of Radio, TV & Cinematography (one post).
3. Regional Centre, Lucknow (one post)
4. Department of Methods (one post: leave vacancy).
5. Dapartment of Linguistics & Contemporary English (one post: leave vacancy).
6. Department of Materials Production (one post : leave vacancy).
7. Department of French (one post).

Qualifications

Essential

An eminent scholar with published work of high quality actively engaged in research. About ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Subject concerned or allied subject : Post Nos. 1 to 6 English; and Post No. 7 French.

Desirable

For Post No. 1 : Specialisation in Commonwealth Literature, or Stylistics, or Modern English Literature or Indian Writing in English.

For Post No. 2: At least ten years experience in either;

(i) Radio/TV programme production for language teaching, or

(ii) Radio/TV programme production for language teaching and the teaching of courses involving such programme production.

For Post No. 3 : Experience in teacher training, materials production and extension work in English.

For Post No. 4 : Experience of organising research and teacher training programmes in Methods and materials production and extension work in the field of English Language Teaching.

For Post No. 5 : Specialisation in any one or more of the following areas :

(i) Applied Linguistics.

(ii) Indian Linguistic tradition.

(iii) Contemporary Linguistic trends.

For Post No. 6 : Specialisation in:

(i) ELT materials for schools and colleges.

(ii) E.S.P. ("English for Special purposes") materials.

At least 10 years' experience in designing curricula and syllabuses and in producing teaching materials in English.

For Post No. 7 : Field of study: French Literature/Language.

Specialisation : (a) Materials production, (b) Special training in Teaching French as foreign language, (c) Experience in organising Teacher Training Programmes at P.G. level, Symposia.

II. Readers/Fellows

Scale of Pay: Rs. 1200-50-1300-60-1900.

1. Department of Phonetics & Spoken English (two posts).
2. Department of Methods (two posts).
3. Department of Radio, TV & Cinematography (one post).
4. Department of Correspondence Course (two posts), (one post : leave vacancy).
5. Regional Centre, Shillong (one post).
6. Department of German (two posts).
7. Department of Arabic (two posts).

Qualifications

Essential

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years experience of teaching and/or research provided that at least three of these years were as Lcturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record of Teaching/Research.

Subject concerned or allied subject: Post Nos. 1 to 5 English; Post No. 6 German; Post No. 7 Arabic.

Desirable

For Post No. 1 : Specialisation in 'Phonetics of English' or Teaching of English with experience in the preparation of teaching materials in Spoken English.

OR

Applied Linguistics

OR

English Language Teaching with experience in the preparation of teaching materials in Spoken English.

For Post No. 2 : (i) Specialised training in the teaching of English.

(ii) Experience of organizing research, surveys, advanced courses and teacher training programmes in methods and materials in the field of English Language teaching at school or college levels.

(iii) Familiarity with inter-disciplinary approaches and psycho-socio perspectives in ELT/TESOL.

(iv) Ability to apply the results and techniques of international research to Indian contexts.

For Post No. 3 : At least five years experience in either (i) Radio/TV programme production for language teaching, or (ii) Radio/TV programme production for language teaching and the teaching of courses involving such programme production.

For Post No. 4 : Specialisation in English Literature: should be able to handle stylistics/Indian writing in English.

OR

Specialisation in the area of ELT/Linguistics: should be able to write courses.

For Post No. 5 : Experience of preparing Correspondence Courses, organizing teacher training programmes, materials production and extension work.

For Post No. 6 : PGDTG or an equivalent qualification, Post Graduate teaching experience, experience of training teachers, experience of production of teaching materials.

For Post No. 7 : Experience of preparing courses in Modern Arabic, organizing teacher training programmes, materials production and extension work in the subject concerned and considerable experience in translation/interpretation in Arabic/English and vice-versa.

III. Lecturers/Associate Fellows

Scale of Pay : Rs. 700-40-1100-50-1600.

1. Department of English Literature (One post: leave vacancy).
2. Department of Materials Production (two posts), (One post: leave vacancy).
3. Department of Extension Services (one post).
4. Department of Radio, TV & Cinematography (two posts).
5. Department of Correspondence Courses (two posts)
6. Regional Centre, Shillong (one post).
7. Regional Centre, Lucknow (one post).
8. Department of German (two posts)
9. Department of French (One post).
10. Department of Russian (two posts).

Qualifications

Essential

(a) A doctorate's degree or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign university.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard; it may relax any of qualifications prescribed in (b) above:

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

For Posts of Lecturers/Associate Fellows in Foreign Languages

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a good academic record may be appointed provided he has done one year post M.A. diploma course in the teaching of foreign languages concerned from a University on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within eight years of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

Explanation for determining "good academic record" the following criteria shall be adopted (For the posts of Readers and Lecturers).

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's Degree should have obtained first class in the Bachelor's degree.

Subject concerned or allied subject : Post Nos. 1 to 3 & 5 to 7 English; Post No. 8 German; Post No. 9 French, Post No. 10 Russian: Post No. 4 English or Mass Communication or Mass Communication Arts.

Desirable

For Post No. 1 : Specialisation in Commonwealth Literature, or Stylistics, or Modern English Literature, or Indian Writing in English.

For Post No. 2 : Experience in producing teaching materials in English and/or writing books and other reading materials for children.

For Post No. 3 : A post-graduate degree or diploma in English Language teaching and experience in the production of teaching Materials/organising ELT programmes; preferably at the school level.

For Post No. 4 : (i) High level competence in English.

(ii) **Practical** knowledge of producing TV programmes.

For Post No. 5 : Specialisation in ELT/Linguistics and should be able to teach Phonetics & Spoken English.

OR

Specialisation in English Literature: should be able to handle Stylistics/Indian Writing in English.

For Posts 6 & 7 : Experience of organising ELT programmes and producing teaching materials.

For Post No. 8 : (i) Experience of teaching and/or production of teaching materials.

(ii) Diploma in translation and/or experience in translation/interpretation.

For Post No. 9 : Field of study: Applied Linguistics, Methodology of Teaching French as Foreign Language. Specialisation in Theory of translation and interpretation. Experience in Material Production. Participaton in organising Teachers Training iProgrammes.

For Post No. 10 : Specialisation in:

(i) Russian and contemporary Soviet Literature;

OR

(ii) Methodology of Teaching Russian as a Foreign Language.

General Information

For Posts under I (2 & 3) : those who applied earlier, need not apply again.

The Institute pays allowances at Central Government rates with the benefit of CPF-cum-Gratuity.

A higher start in the grade may be considered for specially qualified candidates.

Due consideration will be given to candidates belonging to SC/ST for the Posts of Lecturers/Associate Fellows.

Appointments to the posts of Senior Fellows, Fellows and Associate Fellows will be made on a contract for one year in the first instance, after which they will be considered for being appointed as Professor, Reader and Lecturer respectively on the recommendation of the Selection Committee.

Selected candidates will be expected to participate in the teaching and research programmes in other departments also and to work at Hyderabad or at any of the Regional Centres of the Institute.

Applicants appointed to substantive posts will be on probation for one year in the first instance.

UNIVERSITY GRANTS COMMISSION

NOTICE

An International Centre for Science & Technology Education is proposed to be set up in India. It has been decided that even before the Centre is set up, some programmes will be started for the improvement of Science and Technology Education. Consequent to this decision a three-week workshop for the preparation of TV programmes in Science & Technology Education will be organised either at Poona or Ahmedabad in May/June, 1984.

The main aim of the workshop is to offer training in planning the preparation of video materials, script writing, pre-testing and other necessary steps. Materials will be prepared at undergraduate university level. Foreign experts will be available for guidance. 30 participants will be selected from the following subject areas in the first workshop:

Physics, Chemistry, Biology, Mathematics, Computer Science, Electronics, Civil Engineering

Applications are invited through the Heads of the colleges or the university departments giving the following information :

1. Name
2. Qualification including division/grade and year of passing.
3. Teaching experience—no. of years and places where worked, including subjects and classes taught.
4. Research conducted.
5. Seminars/workshops attended in Science Education/Technology Education (give full details).
6. Experience with the preparation of video materials/films/filmstrips/any other, for teaching learning purposes (give details).

The UGC will meet TA/DA of a participant under its rules. Last date of receipt of applications at the UGC is **30th April, 1984**

Project Officer
Room No. 121
University Grants Commission

The Institute reserves the right to accept late applications in exceptional cases.

A candidate applying from outside India will be exempted from the submission of application in the prescribed form and payment of application fee.

Age of Retirement : 60 years.

Instructions

4. Separate applications should be made for each post enclosing **seven copies of the list of papers published** with full particulars along with **one copy of each publication.**
2. Candidates not found suitable by the Selection Committee for the post they have applied for may be considered for a lower cadre post.
3. Candidates called for interview from a place outside Hyderabad will be paid a contribution towards their travelling expenses at the rate of Second Class railway fare, including sleeper coach charges from the place of their work or residence, whichever is nearer, by the shortest route, subject to the production of a railway receipt/ticket numbers.
4. A copy of the application form can be had from the Registrar, Central Institute of English and Foreign Languages, Hyderabad-500 007, on payment of Rs. 2/- and for SC/ST 0.50 ps. only in person or by Postal Order payable to "Director. CIEFL" and by sending a self addressed envelope (10 x 23 cms.) duly stamped ordinary (0.70 ps.) of Regd. Post (Rs. 3.45) and indicating the name of the post applied for.

K. Jayashankar
REGISTRAR

INDIRA KALA SANGIT VISHWAVIDYALAYA

KHAIRAGARH (M.P.)

No. AS/Dev/84/407 (1 to 20).
Dated the 14th March, 1984.

Applications are invited for the following posts in the University Teaching Departments viz. : **Four Professors** one each for (1) Vocal Music, (2) Instrumental Music, (3) Kathak Dance and (4) Fine Arts (Painting), **Six Readers** one each for (1) Vocal Karnatak Music (2) Musicology (3) History of Indian Art and Culture (4) Hindi (5) Research Cell and (6) Bharat Natyam **Ten Lecturers** : one each for (1) Veena/Violin in Karnatak Music (2) Sitar (3) Sarod (4) Shahanai (5) Manipuri Dance (6) Kathak Dance (7) Danceology (8) Sculpture (9) Print Making and (10) Folk Music, **Eighth Accompanists** one each for (1) Mridangam for Vocal Karnatak Music (2) Mridangam for Instrumental Music for Karnatak Music (3) Vocal Accompanist for Kathak Dance (4) Harmonium for Kathak Dance (5) Pung for Manipuri Dance (6) Mridangam for Bharat Natyam (7) Harmonium for Instrumental Music (8) Tabla for Instrumental Music and **One Technical Assistant** for History of Indian Art and Culture.

Scales of Pay : Professor : Rs. 1500-60-1800-100-2000-125/2-2500/-, **Reader** Rs. 1200-50-1300-60-1900/-, **Lecturer**, Rs. 700-40-1100-50-1300/- Assessment 50-1600/- **Accompanist** : Rs. 740-15-800-20-900-25-1000-30-1180/- (Chaudhury Pay) and **Technical Assistant** Rs. 680-15-800-20-900-25-1000-30-1060/- (Chaudhury Pay).

Qualifications : For Professors, Readers and Lecturers as prescribed by the University Grants Commission. Details of qualifications for Professors, Readers and Lecturers as also for other posts may be obtained from the Registrar.

Posts are permanent and carry CPF benefits and DA/ADA at University rates from time to time. Appointees will be on probation according to University rules. Retirement age 60 years.

Reservation of posts for SC/ST will be according to Govt. Rules. If candidates are not available or not found suitable, posts will be filled up from general categories.

Prescribed forms (in four copies) obtainable by sending self addressed stamped envelop of Rs. 1.50 of 25 x 12 cms. Application fee Rs. 10.00 for Professor, Rs. 7.00 for Reader; Rs. 5.00 for Lecturer Rs. 3.00 for Accompanists & Technical Assistant in the form of IPO. Last date for receipt of applications in four copies is **15th May, 1984**. The University reserves the right to keep vacant any of the advertised posts without assigning reasons.

D.K. Ghosh
REGISTRAR

RAVISHANKAR UNIVERSITY

RAIPUR-492010

Employment Notification No. 1/84

Last date of application **23rd April, 1984.**

Applications are invited for the following posts:

1. **Readers** (Rs. 1200-50-1300-60-1900), **Economics** (two posts; one each in Industrial Economics and Econometrics); **Linguistics** (two posts; one each in English i.e. teaching of English as a second foreign language or applied English linguistics and Modern Syntactics and/or Phonology; one post each in **Geography** (Regional Development), **Sociology** (Sociological interpretation of Ancient texts), **Psychology** (Managerial) Industrial/Educational Psychology).

2. **Lecturers** (Rs. 700-40-1100-50-1600), **Economics** (Econometrics/Statistics); **Linguistics, Sociology** (Interdisciplinary research work based on sociological interpretation of Sanskrit works) and **Geography** (Surveying).

Details of qualifications for various posts as on last date prescribed for receipt of application forms, other details and application form can be obtained from the Registrar by sending Rs. 5/- in cash or crossed bank draft together with a self addressed envelop of 23× 11 cm. size bearing postal stamps Rs. 4/50.

Dr. H.N. Shukla
REGISTRAR

UNIVERSITY OF ROORKEE

ROORKEE U.P.

Advertisement No. Estt. (A)/21/3/ A-86(Advt.) 84

Dated : March 21, 1984

Applications on prescribed form, obtainable from the Registrar either personally or by sending a self addressed envelope (9"x4") affixed with 1.10 paise stamps, are invited for the following posts. Candidates in employment are required to send their applications through proper channel.

Last date for receipt of complete application on prescribed form alongwith application fee of Rs. 10/- (by a Bank draft or Indian Postal Orders in favour of the Registrar, University of Roorkee, Roorkee) is **25-5-1984** (25-6-1984 for overseas candidates).

A. **Institute of Paper Technology(U.O.R) Saharanpur**
1. Professor (Pulp & Paper) : One (R)

B. **Water Resources Development & Training Centre**
1. Professor (Hydro-Electric): One (T)
2. Reader (Mechanical/Electrical): One (R)
3. Reader (Civil) : One (T)

C. **Civil Engineering Department**
1. Professor (Highway Engg.) : One (T)

D. **Electronics & Communication Engg. Department**
1. Professor (Communication) : One(R)
2. Professor (Computer: Solid State): Two (T)
3. Reader (Instrumentation: Microwaves & Control) : Three (TLR)
4. Reader (Medical Electronics : Television & Computer) : Four (T)

Qualifications for Professor & Reader

Doctor's degree and at least 12 years' experience are essential for Professors' positions; for Readers' posts, Master's degree with published work of high standard may also be considered, minimum experience required is 7 years'.

Note

1. All other details will be supplied alongwith the application form.
2. Number of posts shown above may change at the time of selection.

R=REGULAR T=TEMPORARY
TLR=TEMPORARY LIKELY TO BECOME REGULAR

Scale : Professor : Rs. 1550-2500
Reader : Rs. 1200-1900

REGISTRAR

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University
News

PRIL 8, 1984

Re. 1.00

27 APR 1984
C.F.T.R.I. MYSORE

PU Convocation

(From L to R) : Shri B.K. Nehru, Governor of Jammu & Kashmir, Shri M. Hidayatullah, Vice-President of India and Prof. R.C. Paul, Vice-Chancellor at the Convocation of the Panjab University.

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UNIVERSITY NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :

M.S. RAMAMURTHY

Student Teacher Relationship

Text of the Radio Talk deli vered by Prof. T. Vasudev, Vice-Chancellor, Kakatiya University, at the All India Radio, Hyderabad.

The teacher and the taught relationship needs special emphasis in the maintenance of academic peace and progress of the educational institutions. In fact a harmonious relationship between the teacher and the taught is the axle-tree on which the meaningful transmission of knowledge depends. I, for one, would feel that the malady of student unrest in our educational institutions stems from the widening gap between the student and the taught spells disaster to all intellectual activity. The apathy of the teacher and the indifference of the student would reduce the academic exercise at the classrooms to a dry ritual limited to a prescribed length of time. Teaching, then, would cease to be a lively interaction of ideas, and dwindle into a dull monologue. The process of learning will degenerate to become synonymous with success in the examination. Unless the teacher becomes a friend, philosopher and guide in the best sense of the oft quoted phrase, the student career will become a waste of time. A young student will be handicapped for the rest of his life, as he is crippled by wrong training. Unless the student has the intuition, aptitude and will to learn, he will remain as good or as bad as a stone.

A rapid survey of the teacher-taught relationship as it was in our ancient universities would act as a contrast to measure the decline and fall of such ideals in the present day. In the pre-Vedic period the teacher's home was the school and it was a sylvan retreat away from the din and bustle of cities. The highest thought in India thus flowed from her woods and forests. The teacher admitted the pupil without any fee in contrast to some of our modern private schools where education is turned into a commercial enterprise. The teacher's admission of the pupil was regarded as a solemn and sacred ceremony known as *Upanayana* or initiation. It was not a mere meaningless ritual but symbolic of a new birth of the student in the spiritual knowledge. The teacher had an exemplary character and his deeds served as an example for the student. The pupil would live with his teacher as a member of his family, serve him with humility and discipline and benefit by his discussions with the Acharya. Education thus became a continuous activity—a Yoga with the stern academic rigours of *Sravana* (Listening), *Manana* (the process of assimilation by deliberation on the topic taught) and *Nididhyasana* (reflection) leading to the realization of truth after its intellectual apprehension. We have lost the ideal *Guru-Shishya* relationship and also the noble purpose of education. Unfortunately both the teacher and the taught have lost the virtues which fostered the ideal institution of teaching and learning.

The idea of the present day residential schools, academies for advanced study, seminars and group discussions could be traced back to the Vedic period. There were *Asramas* or hermitages, a home of learning with an individual teacher at its head, and *Parishads* meant for advanced study. Besides, there were also circles of wandering scholars given to philosophical discussions, and the assemblies of learned men gathered at the royal courts. The *Upanishads* tell us about a philosophical conference, probably the earliest of its kind in the world, called by Janaka, king of Videha. The most learned scholars participated in the discussions and contributed to the philosophy of *Upanishads*. The discussions went on with a high standard of knowledge in a cordial spirit.

It may be said that during the beginning of the Gupta period that the Vedic Scheme of education of Indo-Aryan society was expanded and systematized. There were two types of teachers, namely, *Acharya* who takes the entire responsibility of the student and teaches him the whole of the *Veda* and the *Upadhyaya* who teaches the pupil only a portion of the Veda or its auxiliaries. Elaborate rules are laid down in *Manusmriti* for a pupil's respectful behaviour towards his guru. The pupil should always respectfully address his guru and turn a deaf year to the unjust slanders about him talked by others. In the *Mahabharata* we find stories of pupils such as Upamanyu, Aruni and Utanka who distinguished themselves by exemplary devotion to their teachers. The teacher on his part is required to have high qualifications of learning and character. He should be above praise and scorn, and never be harsh in word or deed. The pupil may abandon the teacher if the latter fails to teach him or becomes a sinner.

Even in the Buddhist monasteries, the relationship between the teacher and the pupil followed the pattern of the *Smriti* scheme. The student served the teacher and the teacher gave a complete instruction to his pupil, supplied their necessaries and nursed them during sickness. The teacher followed the usual method of oral instruction by answering questions or delivering discourses. At the same time in the metropolitan cities there emerged higher centres of learning. *Taksasila* was the most famous university to which people all over the country flocked for advanced learning under world renowned teachers. *Banaras* was one such other university. The pupils here lived with their teachers or attended as day scholars. Strict discipline and moral probity were imperative. The medical education, vocational and technical training also rose during this period. Among the monasteries of Gupta period, the one at *Nalanda* in Magadha attained the highest distinction. The students from abroad also attended it. Equally famous were the scholars of Kashmir.

A brief reference to these prestigious centres of learning in our ancient India makes us diffident if not ashamed to talk about the state of our schools, colleges and universities. We no longer find the zeal, enthusiasm and devotion that characterized the pursuit of knowledge in the past. The ideal relationship between the teacher and the taught has become a myth. Teachers with a sense of commitment and dedication are hard to find. There may be exceptions but exceptions cannot become a rule. Similarly the students with an earnest desire to learn are rare. The students in general have learnt a new pragmatism to cut their studies to the size of success in the examinations. The disheartening trend of demanding marks to pass the examinations has become a menace to the academic institutions.

Among such prevailing attitudes and trends, one is rather hard put to think about harmonious relationship between the teacher and the taught. I do not say that the students have lost all values and adopted a happy-go-lucky attitude in life. But it is sad to find lack of concern among the teachers and the students. I do not think that the students alone are to blame for all the ills. Quite a few teachers have proved unworthy of the trust. We can only wait for a transformation in the attitude of the teachers and the students to bring them closer in their holy commitment to the academic pursuit in a healthy spirit.

It is not possible to go back to the ancient Gurukula system. The system was perhaps good enough for a homogeneous and compact society. The spirit of Gurukula may guide us. To-day we witness rapid changes in every aspect of life. The impact of science on society has changed the values totally. The phenomenal expansion of knowledge has become a great challenge both to the teacher and the taught. The boundaries and barriers of all types have collapsed. The world has shrunk to be a small village. In this context, it is unwise to cling to the old fashioned methods and myths. There is, therefore, an imperative need to inspire the students by setting an example in the practical realisation of secular ideals and democratic disposition, to the negation of all narrow-minded barricades in the academic institutions. If we fail in our commitment, we not only stunt the intellectual growth of the present day students, but very sadly we do injustice to the generations to come. We have to adopt a new system of values to accommodate the humanistic aspirations with the scientific temper. This is the crux of the teacher-student relationship.

There should be no room for confrontation between the teachers and the taught. The confrontation should disappear and it should yield place for a healthy intellectual common pursuit. All student unrest will end the day we convince the students of

(Continued on page 5)

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Science and Technology Profession for Society : A New Inquiry

Vinay Jain*

Between 1960s and 70s the world had seen an unprecedented increase in unemployment. This forced the social and Government bodies to ponder over the problem more seriously. As a consequence, tremendous general awakening had been aroused in all professions for *socially productive work*, in addition to increased stress on various short-term and long-term measures like channelizing of the manpower, creation of job opportunities for more, population control, etc. The awareness for the socially productive work implies the awareness for *duty*. Now, after a decade of planning, experimentation, etc. it is high time that we take stock of the Situation objectively. National Technology Policy Statement is now available. *It leaves for the Government the task of evolving instruments for the implementation of the policy stated by the experts.*

The intention here is to analyse the present state in respect of using Science and Technology (S & T) for socially productive purposes, to seek objective answers to questions like, where we stand, where are we heading for, what could be the possible improvements, etc. In short, it is an attempt to critically analyse the Science Profession that may help in evolving the instruments for implementation.

Undisputed need for S & T

The importance of S & T in today's life is self-imposing. Even a toys shop reveals that. Most industries are eager for new technologies and innovations. Most sophisticated dynamic S &T is sought for the defence of a nation. Space adventure has generated rather newer and more complicated aspirations and demands on S&T. All this has pulled the academic world of natural sciences, and applied engineering and medical sciences together in pursuit of details of matter and Nature at a pace hitherto unexperienced. Besides, the socio-economic systems are looking for Profits of using the scientific methods for day to day work. Needs for unconventional energy sources are hard pressing. What demands such variety of tasks imposes on the S&T?

Fundamental requirements

Science represents the 'practically realizable' discipline of human endeavour that may be considered most close to the truth of nature. Technology is the applied manifestation of the scientific experience triggered by the anxiety for betterment and longevity of each human individual. As such, Science may be treated as the soul (or life) of the Technology.

Most fundamental result of study of Science is that the striking balance seen in nature is based on 'cooperative phenomena'. This is just what has to be translated most earnestly with all possible ingenuity into practice for meeting the rapidly growing demands on S&T. Constraints of economy, needs, etc. have to be taken care only through the planned priorities without sacrifice of the fundamental requirements of the S&T relationship.

Brief review

It has become quite fashionable to talk of 'appropriate technology'. What is usually left unanswered is how to deliver the goods. An objective analysis of the situation in the country reveals features of concern. They are discussed below.

(1) We may derive a sense of pride in that India has the third largest S&T manpower in the world, next only to the USSR and USA. Despite this and the pride in our infrastructure based on the chain of enviable national laboratories and academic institutions, our public sector as well as private sector 'production organizations' tend to prefer importing of technologies not only from the big two but from other smaller countries too. Could it be due to isolation of Science and associated Research and Development from usable technologies? Could it be due to lack of interest or faith in the 'production organizations' for relatively less productive (at least on short-range basis) Science and R&D? Is overcoming the problems formidable?

(2) It has been customary to try to get 'first rate' workers back from abroad to avoid brain-drain or otherwise. What happens to majority of such people? Most working-level are reduced to 'second rate' or even lower in their respective fields. Often they have to throw away all ambitions. Society suffers in turn. Should we not analyse honestly the causes behind such frustrating achievement?

(3) Our young graduates, working scientists and technologists, in general, are honest and hard working. They bubble with energy and have keen desire to contribute to the most challenging problems of the times so that they could match and influence the contemporary world. Pretty soon these young aspirations are reduced to complacency, or revolt in some cases. What could be the self-defeating tactics that this vast country of over 600 millions, crying for material development and self-sufficiency, appears to have surplus qualified S&T manpower

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(although third only compared to much less populated nations)?

(4) An objective onlooker may find the S&T build-up in the country such that the mind is not free, lethargy substitutes for action, working invites technocracy's wrath, talents are degrated or imprisoned, and the concept of 'cooperative collective phenomena' taught by nature is being eroded.

If we take the picture in correct spirit, all individuals constituting the system have to do some honest heart-searching for the sake of their personal future and the future of their loved ones.

An approach for activation

A reasonable ground to start on is that each S&T professional has an important indispensable role in the nation-building process. Primary question to which the solution may be sought may be stated as follows.

> Is it possible to design and trigger the activation of our nation-building process on a 'carrier' driven on the wheels of FREEDOM, SCIENCE, TECHNOLOGY, and CHALLENGE within the 'constraints' of fragile economy, characteristic personal inhibition (fear) in most in exercise of the individuality that is vital for variety and life, and priority for rural upliftment/involvement?

Complexity of such a question becomes more grave if allowance is given for the human nature, strength and weakness of the society, the existing system, passions, and practicality. Numerous free and objective discussions and deep thinking have led to the conclusion that a 'practical' approach for solution of the complex problem has to be based on the financial INCENTIVES in the first place.

The required operation may call for a major policy decision at the social and political levels. To determine the direction of the needed policy, let us consider the experience of our productive organizations/institutions, including the laboratories:

1. Government/public sector loss-profit picture is discouraging, in generality.
2. Private sector picture is composed of usual selfishness in profit-making and neglect of long range research and development for objective sustainable scientific progress in the present world.

In view of the tedious struggle for survival at the individual level, the deadlock may be broken by a 'national-level decision' to provide attractive INCENTIVES and the atmosphere of FREEDOM and CHALLENGE to the productive talents even if the nation has to incur a sizable investment to avoid inflicting hardship to the present public servants for considerable period. In this spirit is discussed a scheme which promises 'attractive dividends' for our national and individual life simultaneously.

A bold policy-breakthrough is proposed:

— Let us characterize the investment (X) in 1 above as 'unproductive but recurring' (ubr) at the existing level.

—Infuse freedom and challenge for productive work on competitive basis to freeze and slowly reduce the ubr expenditure.

With this base, a practical scheme could be set as follows:

(i) Let us take a 'bold step' to *double* the prevailing salaries of the workers in Govt./public sector with the provisions, (a) that salary for equivalent of 6 months only would be payable on regular basis, and (b) that the salary for rest of the 6 months (or any part of that) could be earned through funds won for productive schemes on merit in 'Open'.

(ii) 'Open' above may include the Govt. plans and the private sector requirements.

(iii) A Direct Deal between the funding agency and the 'working-group' would be permissible.

(iv) Dead investment of 40 per cent of X by the nation for 6 months salary would be progressively reduced and eliminated through new recruitment schemes.

Expected Gains: A number of gains expected may be assessed rightaway:

(1) Actual workers, including scientists and technologists, would receive tremendous INCENTIVE through the prospect of doubling the yearly income if they could earn their wages for 6 months from the productive schemes funds.

(2) Apparent frauds in S&T would be checked automatically since no funding agency could be cheated again and again in a direct deal.

(3) Incapable workers would be exposed. In turn, the future youth would receive encouragement for success and honesty in work.

(4) Thoughtless race for 'typed—education', such as resulting in practically non-usable qualified manpower, would be automatically discouraged.

(5) Employment prospects would improve. More honest youth would be brought in the mainstream of nation-building.

(6) Management level would be induced as well as forced to reorient the system for end-oriented working.

(7) Govt. would now be left with at least 60 per cent of its prevailing investment X for funding the national priority schemes (e.g. rural or cottage in-

dustry biased) with expectation of more positive results and a better hope for future, progressively.

(8) Private sector, now free to deal directly with the scientists/technologists etc. on competitive/choice basis, would find the much needed INCENTIVE for investments in the progressive R&D that would be carried out at the national laboratories and institutions. Since the private sector is particularly gifted in both short and long range planning for marketable products, this would lead to healthy, useful, progressive work for the future, on a long-range basis too.

All this would be on the basis of freedom and healthy challenge.

New Challenges and Problems: The following are readily foreseen.

(A) New recruitment schemes would become necessary in the spirit of an healthy competition and the need to progressively eliminate the dead investment of about 40 per cent of X by way of the normal salaries. These may have to be on contract basis.

(B) New 'pensionary' bank-schemes, a kind of non-employment allowance (after first employment, say), and the like would be needed to take care of the social-security needs, which in turn would serve all and not only some privileged Govt. servants.

(C) Some management problems are likely initially in view of (A). However, the INCENTIVE and pressure on the management level would hold hope for practical solutions.

(D) New industrial policy laying emphasis on the real 'work-based bonus' to allow equitable emoluments to the industrial workers would be required, that may also help some of the management problems.

(E) New accounting challenges would be posed to cope with the requirements.

(F) Legal institutions may get more pressure of technical nature.

In conclusion, an attempt in the suggested direction could generate the employment opportunities on the 'need-basis' and tend to infuse cohesiveness, cooperation and collective feeling in us as a nation on the road to 'natural development'.

Most Science and Technology professionals may be expected to support the elements of the possible activation process discussed. And, it should receive near unanimous support from the future youth who after all, matter most for the future society. A nationwide opinion-survey could be taken-up for practical assessment. ☐

Student Teacher Relationship

(*Continued from page 2*)

the relevance of what we teach and the sincerity with which we teach. The waste of energy and potentialities of the youth will in the long run drain the nation of all its vitality. We cannot afford to wait and see with apathy. This is the time to act and stem the tide. To sum up:

I feel the student-teacher relationship will be effectively meaningful if the parents, the teachers and the society put their efforts together to foster close rapport among themselves. The teachers should develop an affectionate rapport with the students and try to look after the needs of the students even outside the class room. The teachers and the parents together can correct the present trend which is not all that cordial. The responsibilities of society are very important and all the three—the students, the teachers and the parents—should involve themselves in the constructive activities without frittering their energies.

The relations between teacher and the taught would improve provided that the teacher has necessary devotion, scholarship and sincerity while the student responds with zeal and passion for learning. My long experience of three decades as a teacher prompts me to say that the teacher should always go out to understand the aspirations and the needs of the students and guide them gently and in the right direction.

The students often feel that they have a prestigious stake in every demand they bring to the notice of the administrators. Therefore, the administrators must be very cautious while considering their various problems and convince them in a right manner. If the administrators and the teachers establish a friendly relationship with the parents, the fast worsening situation may be toned up. ☐

AIU-Sri Sathya Sai Institute Seminar on Examination Reforms

A Workshop-Seminar on Examination Reforms and Question Banking jointly sponsored by the Association of Indian Universities, New Delhi and the Sri Sathya Sai Institute of Higher Learning (Deemed University), Prasanthinilayam, Andhra Pradesh was held at the Prasanthinilayam campus for a period of five days from 19th to 23rd March, 1984. It was inaugurated by the Chancellor of the Institute, Bhagawan Sri Sathya Sai Baba and presided over by Prof. V. K. Gokak, Vice-Chancellor of the Institute. The ceremonial lamp was lit by the revered Chancellor amidst Vedic chanting.

Prof. N. R. Krishnaswamy, Head of the Department of Chemistry of the Institute and Director of the Workshop welcomed the team of experts from the Research Cell of the Association of Indian Universities, New Delhi and the participants of the three college campuses of the Institute, Anantapur (Women's College, Andhra Pradesh), Brindavan (Whitefield, Bangalore) and Prasanthinilayam. In the course of his speech, Prof. Krishnaswamy pointed out the pioneering research work done by Prof. Natarajan and his co-workers in higher education of the country.

Vice-Chancellor, Dr. Gokak, in the course of his address, brought home to the participants the chaos and confusion of the Examination system prevailing in the Universities today. He spelt out the two main objectives of the Workshop-Seminar thus :

(1) to awaken the teachers primarily to the intense perception of the present situation in the entire country in matters of the Examination System of the Universities, and secondly (2) to train them in the necessary skills and techniques so that they may acquire the ability to remedy the cause of the tragedy. He believed that the teachers thoroughly trained in workshops of this type only could save the situation, do away with the state of utter disorder and disorganisation now prevalent in the areas of teaching methods, learning processes and evaluation techniques, and bring purpose and meaning to higher education. He,therefore, exhorted the participants to take full advantage of the Workshop Seminar by going through each of the programmes in right earnest.

The revered Chancellor, Bhagawan Sri Sathya Sai Baba, in a scintillating discourse, highlighted several aspects of higher education. At the outset of His discourse He spelt out the nature and objectives of true education. "True education consists in *Samskara* (the refinement of character) and *Vyaktitva* (cultivation of personality). Mankind will bloom and blossom if its educational system is marked by moral and spiritual excellence. It is the first and foremost duty of every man to cultivate in himself the twin ideal of *Samskara* and *Vyaktitva*. Any system of education that does not cater to the fostering of these ideals is an exercise in futility".

Reflecting on the Examination Systems of the ancient past and the present the Chancellor said that in the former, examinations served as *Raksha* (protection), whereas now they had become *shiksha* (punishment). The tests conducted by teachers in the ancient system were the tests of morality whereas the tests conducted today are far remote from it.

While focussing the nature and purpose of the Question Banking the revered Chancellor said, "As we keep only valuables such as gold, currency notes etc. in a Bank for ensuring safe custody, so too. the questions stored in a Question Bank should be valuable. Just as we do not keep brass and tinsel in a Bank, so too we should not keep unvalidated and meaningless Questions in the Question Bank. The questions stored should be ideal, genuine. They should shine as path-finders to the youth of today."

While bringing out the connection between the question papers

Bhagwan Sri Sathya Sai Baba inaugurating the Seminar on Examination Reforms set for an examination at the end of a particular course of study and the syllabus framed and prescribed for the purpose, the revered Chancellor said, "The questions should have direct bearing on the text books prescribed, and the teaching imparted to the students. We shall be misleading the students if our questions in the examinations have no relevance to the syllabus prescribed and the teaching instructions given. The questions should embrace all the topics in the syllabus, and they should be sound enough to enable the students to have a thorough understanding of the syllabus. He asked the participants to contribute one lakh questions to the Question Bank, a hundred questions on each chapter of a text book so that these questions would serve as rich reservoirs in times of necessity, and they would facilitate a ready, thorough and fair examination.

The Chancellor also made some very pertinent remarks on the subject of teaching techniques. He said, "True teaching proceeds from the heart, and it springs spontaneously. Unfortunately a contrary technique of teaching is prevalent today. Teaching has become a transmission from head to head. Teachers teach with the head, and students listen to them with the head. Students go to the examination hall with a headload of information, empty it out on the answer books, and return home empty-headed." "This kind of students may earn degrees, but what good will these youths bring to the people around?" He continued, "True teaching goes straight to the heart and imprints itself permanently on the heart of the students. The teaching imparted today is mechanical, and can be compared to a poloroid photograph which leaves no 'negative' for further prints. On the contrary, true teaching imprints itself on the plate of our heart, and can be compared to a camera photograph leaving a negative from which we can have any number of prints developed. It should be the earnest endeavour of every teacher to impart true teaching to his pupils and leave on their heart an indelible impression of his teachings. Chancellor Bhagawan Baba further added that true teaching involves a three-fold process of understanding information (knowledge) embodied in a book, translation of it into practice, and transmission of it to the students. Unfortunately a teacher today knows only what is contained in a book, so much so, the brain (mastaka) and the book (pustaka) become one. If that was so, a student might as well stay at home and study there—commented the Chancellor.

While analysing the causes of student unrest in today's society, Bhagawan Baba felt that the absence of punishment for the erring students is one of the causes of deterioration of the student community. As a harnees to a horse, a goad to an elephant so is punishment to a student. As unharnessed horse topples down the rider, an ungoaded elephant hurls away the mahout, similarly an erring student unpunished disregards and disobeys his teacher. But punishment (*Shiksha*) should be given with love (*Prema*) and it should serve as protection (*Raksha*).

While calling upon the teachers to shape themselves as ideal teachers, Bhagawan Baba asked them to remain as seekers of knowledge throughout their life. Sincere teaching illumines a teacher in the same way as speed charges the battery of a car. Only an illumined candle can light up other candles. Only a sound teacher can impart sound learning to his pupils.

The Chancellor, Bhagawan Sri Sathya Sai Baba concluded His discourse with a call to the participants of the Seminar to open not only Question Banks, but also Banks of Good Conduct, Banks of Good Feelings and Banks of Compassion. He blessed the teachers to train themselves thoroughly in the workshop and spread their fruitful gains to all those around.

After the conclusion of the revered Chancellor's discourse, Prof. Natarajan expressing his deep sense of appreciation of the Divine discourse, said "After having visited as many as fiftyseven universities of the country, I now come to a university where the Chancellor's words are not only the words of inspiration, the words of wisdom, or the words of blessing, but they are also the words of high technical knowledge. I feel blessed by His inspiring discourse, and believe it will serve a great purpose for all-round development in the sphere of higher education if a cyclostyled copy of His discourse can be made available to each teacher".

Professor Natarajan agreed with the revered Chancellor that "Education is what remains after all that has been emptied by the students in the examination". Regarding the role of the teachers, he said that if it had been played properly in the past, the situation would have been much better than what it is now. While giving an idea about the five-day programme of the workshop, Prof. Natarajan said, "Question Banking is perhaps the only device that tries to integrate teaching, learning and evaluation" and hence this training course in Question Banking will enable the participants to acquire the intellectual ability to look more professionally into the job of teaching, learning and evaluation and thus bring about the necessary reforms and improved methodology in each of these activities of higher education". □

Shri Nehru Addresses Convocation of Panjab University

Excerpts from the convocation address delivered by Shri B.K. Nehru, Governor of Jammu & Kashmir, at the Panjab University, Chandigarh on March 10, 1984.

Convocation

"I am greatly honoured that I should have been asked to address this convocation of the prestigious University of Panjab. As a former resident of Chandigarh I have been the beneficiary of the facilities that this University provides, particularly of its well-stocked library, and have had the privilege of exchanging ideas with many of the distinguished members of your faculty with considerable benefit to myself. But I was not aware that this benefit was great enough to raise my academic status to that of a Doctor of Literature. That your Chancellor should have been pleased to make me one flatters me greatly; I am most sensible of the honour.

"These annual functions at which graduates from the universities are admitted to degrees are, in this country, following the British pattern, called convocations. The Americans, however, use a more appropriate term. They call them "commencements"; for they symbolize for young men and women the commencement of their lives as full-fledged members of society. In Indian terms they mark the end of the period of Brahmacharya and the commencement of Grahastha.

"As I stand here today my thoughts turn to the day, well over half a century ago, when I too, like you, was at the threshold of the commencement of my life. A great deal of time has passed since then but I doubt if your feelings and your preoccupations are very different those from that I had when I was in your position. I was full of ideas; with the benefit of hindsight I see that they were all half-baked and almost all worthless. I was full of ideals—it is a most valuable privilege of youth to be idealistic—and most of these ideals I am glad to say I still retain. I was full of a passionate desire to change the world and to rid it of its injustices; a desire that still remains as passionate, though the difficulties of overthrowing the inert mass of tradition and the burdens of historical consciousness and the inborn selfishness of the human race are more apparent to me now. But my great and immediate concern was how I was to earn a living and I am sure that this is the concern of most of you who, like me, were not born with a silver spoon in their mouths. It is this concern which has compelled me to give thought to our system of education and its inability to solve the problem of educated unemployment.

"A general university education does not unfortunately fit one for earning a living. Our universities were patterned on the elitist British universities of Oxford and Cambridge; these were designed for the needs of the leisured and propertied classes with the object of perpetuating the qualities appropriate to that class. The alumni of these universities had no need to earn a livelihood; their material needs were taken care of in ample measure at the expense of society through the device of hereditary and virtually untaxed wealth descending from generation to generation. The universities were then semi-monastic institutions concerned with purely academic and scholastic studies with no concern for any utilitarian activity. Even these studies were confined largely to ancient civilisations, languages and philosophies, on the mediaeval assumption—an assumption which is strongly held in our own country even today—that all wisdom rested with the Ancients. Though the field of studies was gradually widened to include, though after some resistance, a few physical sciences, the emphasis in these universities has always been on the pursuit of learning for its own sake and of enlarging, by their research, the frontiers of human knowledge. The economic benefit that might flow to the community or the individual from these activities has been only of secondary concern. When I was sent to England for university education my father's instructions were explicit. I could go to whichever university I liked and study whatever subject I liked—for it made not one iota of difference what academic course I pursued—provided I did not go to Oxford or Cambridge. The explanation he gave me for this prohibition was that those universities would render me totally unfit for earning a living. He spoke from experience, for he had spent six years at Oxford himself.

"The reason why our universities were patterned on Oxford and Cambridge—although in their organisation they followed the University of London—was, of course, that when the university system was started by our British masters these were virtually the only institutions of higher learning in their country; it was to them that their experience was essentially confined. Another reason was that Indian society of the 19th century was as elitist, if not more, as that of Britain at that time, based, as theirs, on hereditary wealth and privilege. There was a conscious attempt at one period to produce brown replicas of the English gentleman as the surest way of perpetuating British influence in India. Yet another reason was that large numbers of Indians with a knowledge of English and a smattering of general knowledge were wanted to satisfy the requirements for clerical and other subordinate labour in government offices; the universities produced the supply to meet that demand.

"The needs of the 20th century—and even more so of the approaching 21st century—are vastly different from those of earlier times. This is particularly true of poor and developing countries such as ours. If we are to win the battle against poverty and the appalling misery it entails, the converting of ourselves into bad replicas of the 19th century English gentleman will not help. What we need is the generation on a very wide scale of the skills which will make two blades of grass grow where only one grew before. What Browning thought of Wordsworth or how Assyria warred with Babylonia are fascinating pieces of knowledge and add greatly to the enjoyment of life of those interested in them; but they have little relevance to the needs of our country today Nor do they help those who have spent their time studying them in filling their empty stomachs—an activity infinitely more enjoyable (when the stomach is empty) than all the arcane learning in the world.

"The new requirements of modern times have led in all countries to modifications in the concept of a university. One basic change has been that the university is no longer an elitist institution but one open to all sections of the people through highly subsidised education. The second change is that from being purely intellectual institutions, designed to produce highly evolved and sophisticated individuals, their purpose has become consciously to meet the needs of the community to grow. We in India are attempting to introduce similar changes but unfortunately the pace at which we are proceeding is exceedingly slow. The existing system has developed a momentum of its own; the pressures it exercises are great; and it meets with more success than it deserves. I confess that as Chancellor of the Universities in my State I am sometimes distressed at the ease with which the University Grants Commission, which is the guardian of our system of higher education, lavishes money on universities to pursue the most exotic branches of learning with little relevance to community needs. As a citizen of India I am equally distressed at the rate at which liberal arts colleges are being opened throughout the country under political pressures emanating from the totally mistaken belief that a college degree holds the key to remunerative employment.

"If we had a system of education more suited to the needs of the time and designed on the one hand to satisfy communal needs while, on the other, providing the students with the means to earn a livelihood, we would stop general education at the 10+2 or pre-university level. This level of general education is quite sufficient to guarantee to those who have benefited from it an adequacy of general knowledge to enable them to end their formal education if they wish. This indeed should be the normal point at which the vast majority of students who have not set their eyes on any particular profession or calling should terminate their studies and enter life. This, and not a university degree, should be the normal qualification for the lower ranks of the public services; anybody with higher qualification shouldbe regarded as over-qualified for these appointments and debarred *ipso facto* from consideration. A reform of this kind would automatically substantially reduce the pressure on our universities, enabling them to raise their standards and the quality of their education.

"Those who, at this stage, wish to enter the professions should then enter specialised institutions which give education and training in their particular specialities. It could probably be desirable, though not essential, for these institutions to be separate from, or only loosely connected with, the university proper so that each can develop according to its own specific needs. This is the system which is more or less followed today in the subjects of engineering and medicine and, to a certain extent, the Law. Agriculture now has its own separate universities. But the list of subjects in which this kind of training should be separately and specifically imparted should be substantially increased to correspond to the economic and social needs of contemporary India. Some samples of these new and expanding needs would be architecture, interior decoration, management of various kinds, including hospital and hotel management, accountancy, cinematography and in particular public administration.

"I mention public administration specifically because it is the lure of the public services at the All-India level, the State level, or even at lower levels which is in reality the cause of the pressure on our universities and the enormous number of graduates with a general education which are their product. Your Chancellor will recall a couplet by my fellow townsman, Akbar Allahabadi :

> *"Zauqu-i-laila-i-civil service ne is majnoon ko*
>
> *Aisa dauraya langoti kar diya patloon ko*".

"But administration in this more complicated age has by itself become a specialisation. It can no longer be learnt "on the job"; nor does a study of zoology, sanskrit literature or higher mathematics has any relevance for it. Those who wish to enter that field should be recruited at the 10+2 stage and be given long and arduous training in that specialised art, science and technique in separate institutions...

"Conditions today have radically altered. We are today a dynamic society changing almost with explosive vigour in every field of human activity— economically, politically, socially, culturally and in the fields of arts and sciences. New opportunities for human achievement and employment are being created every day and these are what the progressive young men and women who wish to make a mark in life should take advantage of. Unfortunately we tend, through force of historical habit, once again to turn to government for employment. The opportunities which governments can provide for employment are very limited. Nine-tenths of the work which governments perform is unproductive in the sense that it does not by itself create any of the goods and services which are necessary to sustain human life. Its functions are primarily regulatory; it attempts to form a structure and to create conditions, principally through regulation, in which economic activity can be carried on, and through which it can be encouraged. But as it directly creates nothing, it must finance itself by taking to itself through the process of taxation, a share of the goods and services created by those who are themselves engaged directly in the productive process...

"The relevance of this to the problem of employment is that government employment has necessarily to be limited by its revenues and these limits in our present conditions have more or less been reached. The attempt to cross these limits under pressure of growing population has resulted on the one hand in large and increasing deficits in governmental budgets giving rise to inflation and the rise in prices from which all of us have been suffering for many years and which cause enormous harm and injustice to society. On the other hand, the remuneration to the public servant goes on being reduced in real terms so that today we have, in all probability, about the lowest paid public servants in the world whether among the rich or the poor countries. If our aim still is the service of the government and we are prepared to run around from door to door and to get employment we will find, in the unlikely event of our getting it at all, that we get something so lowly and so ill-paid that it will not be worth the effort.

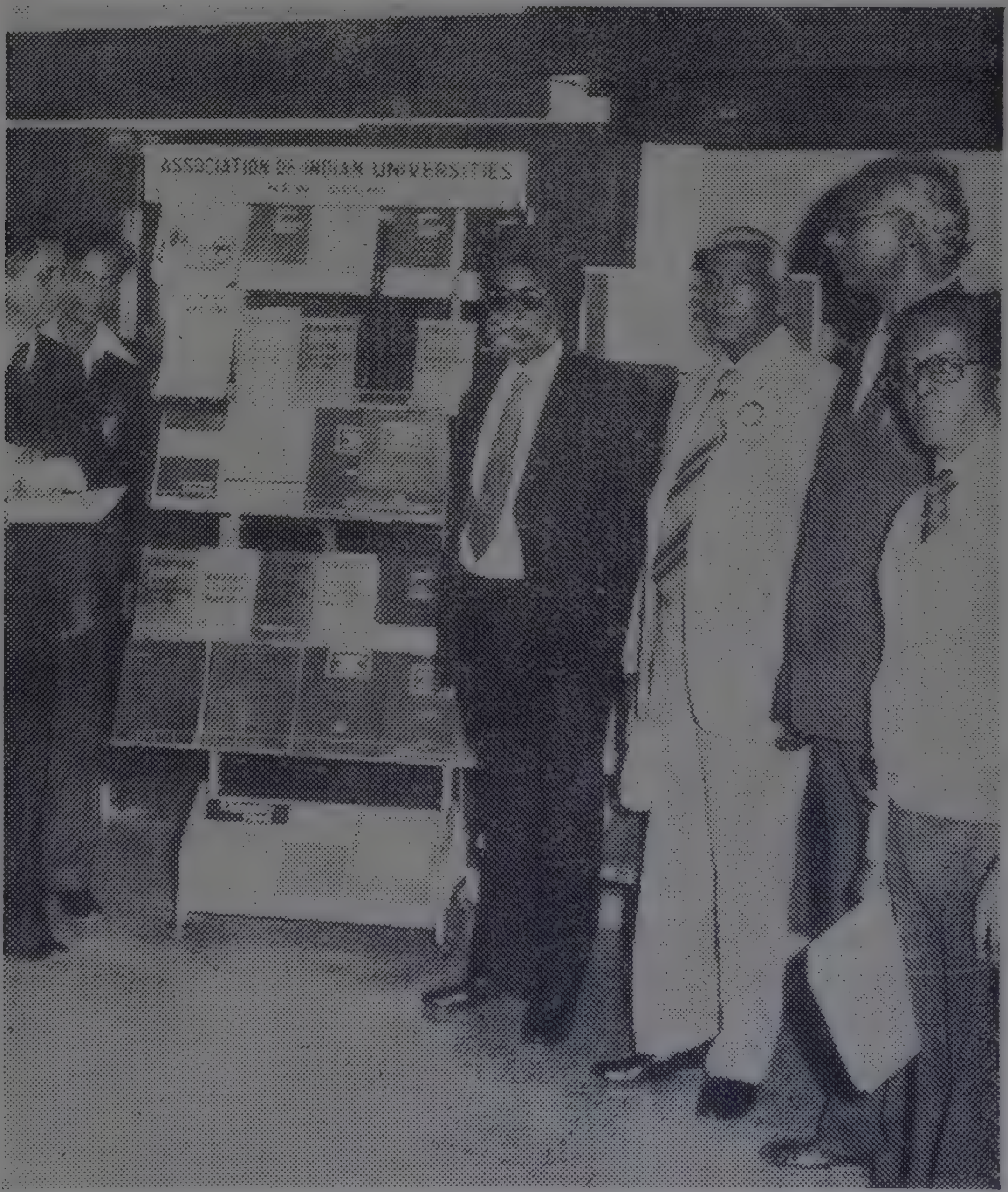
"The 10+2 stage should be the watershed: those who do not have the ability or the aptitude for the professions should then find their means of livelihood through vocational education. We all know that in spite of the comparatively slow growth of our economy the demand for a whole variety of goods and services is increasing rapidly. This demand is at many levels from the top to the bottom. Although we should never lower our aims—for all of us the sky should be the limit of our achievement—our ambitions have to be related to our abilities and to our capacity to work. It is not necessary that all of us should start at the top of our professions; nobody does. We should not hesitate to start at the bottom and make our way up, gradually but rapidly, to as far as we can go. While our educational system has produced a plethora of high level engineers, scientists and doctors—and so many in fact, compared to the economic development of our country, that they cannot find employment here and have become an important item of our export trade—we have enormous shortages of middle level technicians in all these fields. They command today for their skills very substantial rewards, now and again surpassing even those available to people who may, on paper have higher qualifications. We have great shortages of stenographers; we have practically no institutions to train proper secretaries who, in other countries, perform the most responsible tasks as assistants to high executives and draw quite fabulous salaries. We have enormous shortages of what may be regarded as even simpler skills, such as those of plumbing, carpentry, joinery, machining, masonry, repairing of radio and TV sets and a whole variety of other techniques. Those possessing these skills are now in a position to command very substantial emoluments and there will be for them ever-inreasing demand as the economy grows. We have on paper at least recognised this deficiency in our system and have established many technical training institutes. But unfortunately the priority given to this kind of training, which is more useful for the growth of the economy (and more rewarding to its practitioners) than higher education, receives scant financial, administrative and educational support. The emphasis, given the limitations of financial and manpower resources, requires to be drastically changed.

One reason why there is so much resistance to young men and women going in for this kind of technical education, and for their preference for the purely academic education in the universities, is that in our society even today the clerk has greater social prestige than a plumber or a fitter. This attitude of mind is a remanent of our feudal past and must be radically uprooted. We are an extraordinary society in which traditional respectability has been given to those who have, by and large, contributed the least to the social good. The Brahmin, with a monopoly of ritualistic and cabalistic knowledge, on the basis of which he claims to hold the keys to heaven but lives on the earnings of those who earn their living by the sweat of their brow, is held in higher esteem than the Sudra who all his life has, through his labour, produced the wealth on which the rest of society has traditionally battened. The progressive societies in the world have long ago given up these attitudes; if we are to join their ranks and not increasingly reduce our stature in the comity of nations, we must consistently and actively attune our thinking to the conditions of today and forget totally what the Ancients, who lived in an entirely different age, have told us. The utility to society of a clerk fiddling with pen and paper is marginal; in the most advanced societies pen and paper are both almost ceasing to exist. But without the work performed by the machinist or the plumber, societies would be unable to feed, clothe or transport themselves and the individual would find his way to heaven much sooner than he had any desire for the transition.

If from what I have been saying you get the impression that you have wasted your time at the University, you are quite mistaken. One of the main functions of a university education is to teach its alumni to think for themselves. That is why the particular course of your studies is largely irrelevant; what is relevant, if you have been able to develop it, is the habit of looking at facts objectively as they are; applying unbiased reasoning to those facts and coming to conclusions on the basis of this ratiocination, no matter how possibly startling and probably opposed to authority they may be. It is essential of course that the data on which your conclusions are reached is comprehensive; if essential facts are left out from the foundation of the edifice that your reason constructs on them that edifice will be weak. The advantage of university education is that you have a much wider knowledge of the facts than an uneducated man and, even more importantly, you have the knowledge of your own ignorance; you have, moreover, a disciplined mind so that you do not jump to conclusions. I had the good fortune to have among my teachers the great Professor Laski with whose writings some of you might be familiar. He was not only a great political thinker but a great educator and I had the privilege over many years of getting his special attention. Fourteen years after I left the London School of Economics I met him again and said to him that I had a confession to make; this was that my ideas then were at 180 degrees removed from all that he had taught me. His answer was "I taught you no opinions. What I was attempting to do was to teach you to think for yourself and if the school of life has taught you ideas diametrically opposed to my own I feel flattered that I have succeeded in educating at least one mind". □

DISPLAY OF AIU PUBLICATIONS

The AIU displays publications at special functions of Universities like Jubilee Celebrations, National and International Conferences, Workshops, Convocations, Book Exhibitions, etc.



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The photograph shows Prof. G.S. Marwaha, Director, ISM and others at the Book Exhibition organised on the occasion of Indo-Polish Symposium on "Application of Geological and Geophysical Techniques To Mining" on February 22-24, 1984 at ISM, Dhanbad.

National Population Education Programme being implemented at Saugar

On 1st March, 1984 an essay writing competition on "Small Family—Happy Family" was organised at the University College of Education (Faculty of Education) Dr. H.S. Gour University of Saugar for B.Ed. students and first, second and third prizes were declared and awarded for the best essays.

On 5th March 1984 a symposium on Population Education was conducted by the Faculty of Education at the University College of Education, Sagar. Dy. D.S.E. Sagar division Shri P.S. Shrivastava, Shri K.K. Mishra, Principal of G.S. Hr. Sec. School, Bhalaghat and Shri N.K. Rawat, Lecturer, B.T.I., Sagar were the main speakers in the Symposium. Dr. S.P. Ahluwalia, Professor & Dean, Education, presided over the symposium.

For M.Ed. and B.Ed. students a debate competition on "Protection of democracy depends on population control" was organised by the Faculty of Education. The teachers of the college also participated in the debate and highlighted the topic. The best speakers, First and Second, were awarded prizes in the debate.

The students who had offered Population Education prepared some improvised instructional material such as Charts, Albums and Scrap-books to clarify the concept of Population Education.

To popularise population education among pupil-teachers the Faculty of Education and the University College of Education have plans to work in the following areas:

(i) To initiate and develop Research in Population Education at M.Ed. and Ph.D. levels; (ii) To develop instructional materials at B.Ed. level; (iii) To motivate pupil-teachers of B.Ed. degree course to offer Population Education as an optional special paper; (iv) To develop a research project in the area of Population Education to be financed by the UGC, the NCERT or the ICSSR; and (v) To popularise population education among Secondary School Teachers, parents and students of the cooperating schools.

National lectures-cum-seminar in library and information science at GU

Prof. T.K.S. Iyengar, National Professor and Librarian of Indian Institute of Science, Bangalore, delivered a series of National Lectures on 20th Feb., 1984 inthe Gauhati University. The series of Lectures, sponsored by the U.G.C. was organised by the Deptt. of Library Science of the university along with a one-day departmental seminar held on 21st Feb., 1984. Both the programmes were inaugurated on 20th Feb. morning by Dr. S.N. Bhorali, D.P.I. of Assam.

In his inaugural address Dr. S.N. Bharali appealed to the Librarians to try for a qualitative improvement of reading habits among the academicians and others. He assured the implementation of UGC pay-scale (according to qualification) to the college librarians. Prof A.K. Sharma, Member of Parliament and President of the Assam College Librarians Association dwelt on the importance of organising such lectures and seminars and hoped the authorities concerned and the society would understand the difficulties and demands of the painstaking college librarians of which he was fully aware as President of the A.C.L.A. Sri Ram Goswami, Director of Libraries, speaking as a Guest of Honour, outlined the changing forms of modern libraries.

Prof. N.N. Siddhanta, Head of the Dept. of Chemistry, G.U., in his presidential address, expressed his deep concern for the lack of basic library facilities and decreasing reading habit among the students, teachers and statesmen.

After the inaugural function, Prof. T.K.S. Iyengar delivered two Lectures, in successive sessions, on (1) Automated Information Systems and (2) Computerization in Academic Libraries. Prof. Iyengar's lectures brought a sense of awakening in the minds of the working librarians. He made the librarians and the elite of the University think afresh of the possibility of application of modern Computer technology in the University library systems, especially in matters of information storage and retrieval for scholars and scientists, the fruits of which may be shared by any local college library also. A demonstration was also organised. A resolution was moved that the G.U. Computer Centre should boost up the existing Computer peripheral equipments installed in the Physics Department in order to be utilised by the library also. He advised that the library schools impart modern expertise to the prospective library and information scientists.

The Seminar on the "Impact of College Libraries on Higher Education in Assam" was held in two successive sittings under the Chairmanship of Prof. T.K.S. Iyengar and Shri N.N. Sharma respectively.

Seminar on English teaching in Agril. Universities

It is depressing to note that the standards of teaching and learning of English are deteriorating every day. Something urgent and effective must, therefore, be attempted to arrest this deterioration, otherwise we risk playing with the career of our children", said Mr. L.D. Kataria, Vice-Chancellor, Haryana Agricultural University (HAU) while inaugurating the first national seminar on "Reorientation of Teaching of English in Agricultural Universities."

Mr. Kataria further said, "We must change our attitude towards English. We should bear in mind that English is no longer a foreign language and that it is no more an instrument of oppression in the hands of those who weild it. Having been placed in the Schedule under the Constitution it is now very much an Indian language like Hindi, Urdu, Marathi, Telugu, etc. and has to be taught and learnt with equal zeal and devotion." He stressed on more research in methodology and evaluation techniques to bring out reforms in the present system. The focus, he said, should be on a set of objective norms.

The three-day seminar was sponsored by Indian Council of Agricultural Research (ICAR). Delegates from all over the country participated in the seminar.

Ambassador Barnes visits BHU

Ambassador of the United States His Excellency Harry G. Barnes described Banaras Hindu University as "More attractive, beautiful and fabulous than he expected" while visiting the campus of Banaras Hindu University and said that BHU founded by the great patriot Mahamana Malviya "as an unique institution of the world".

He was received at the Bharat Kala Bhavan by the Vice-Chancellor Prof. Iqbal Narain. He showed keen interest in the collections of the museum which were explained to him by Officer on Special Duty Shri O.P. Tandon. Registrar Mr. R.C.P. Sinha explained to him about the academic, co-curricular and extra-curricular activities of the University.

Mr. Barnes was keen to know about the Mahamana Malviya life and his efforts in the foundation of the Banaras Hindu University.

During the banquet hosted by the Vice-Chancellor at his residence, he was introduced to the Directors, Deans and officials of the University. Prof. Narain presented him the publications of the University. He also visited the Department of Mining Engineering and Faculty of Law. He was particularly interested in the project of the Rock Mechanics and Ground Control Division of the Mining Department where expensive American Testing Machines are installed. Prof. B.B. Dhar, Prof. D.P. Singh and Prof. K. Surnaryana explained to him about the project. In the Faculty of Law, he met Dean of the Faculty Prof. M.C. Bijawat and other teachers. He appreciated the library of the faculy and the Legal Aid Programme.

APOGEE 84 evokes enthusiastic response

The response to the Second All India University Youth Academic Week which will be organised from April 13 to 15, 1984 at Pilani by the Students Union of Birla Institute of Technology & Science has been enthusiastic judged by the number of papers received from students all over India. Nearly 200 papers have been received. Students from Sambalpur, Coimbatore, Kakinada, Madurai, Visakhapatnam, Jaipur, Sagar, Dhanbad, Madras, Srinivasanagar in Karnataka, New Delhi, Bombay and Mysore, besides students of BITS, would be presenting their papers at various groups and sessions planned.

Besides paper presentations over a broad spectrum of professional areas, invited lectures, book exhibitions, campus technology based films and documentaries are some of the other events planned.

GU organises seminar on people and cultures of NE region

A two-day seminar was organised by the Department of Anthropology, Gauhati University, on "People and Cultures in North East India: Changing trends" with financial assistance from the I.C.S.S.R. Centre, Shillong.

The seminar, inaugurated by Dr. J.M. Choudhury, Vice-Chancellor, Gauhati University, stressed on the importance of case studies done by Anthropologists because by that process valuable information may be gathered, analysis of which would not only help the academecians but also the concerned peoples. The inaugural session was presided over by Shri S.C. Rajkhowa, former Vice-Chancellor of Gauhati University and Prof. A.B. Mukherjee of the Panjab University acted as the chief guest. Altogether 46 participants from different parts of North East India participated in the seminar.

TV production centre at Roorkee University

An ambitious scheme for educating rural masses about the latest developments in science and technology through TV has been drawn up by the University of Roorkee. The university will set up a TV programme production centre on its campus for preparing documentaries. Simple language with illustrations will be used in these documentaries and it is felt that this will be of immense benefit to the villagers.

To begin with a total of 40 hours programme would be produced for telecasting by Delhi and Mussoorie TV centres and by mobile vans. These programmes could also be relayed through INSAT to other parts of the country.

The total cost of the project would be about Rs. 153 lakhs.

It is reported that the UNDP and UNESCO as also the Department of Space have responded enthusiastically to the proposal of the university. The proposal is awaiting clearance by the Education Ministry and the UGC.

New courses at Padmavati Women's College

Padmavati Women's College, Tirupati, proposes to start a new course on 'Women's studies' to ensure a research activity on women's status and their problems.

Other courses proposed to be introduced include B.Sc. Nursing, Courses in Radio and TV assembly and repair, Computer Science and Physical education. Statistics is proposed to be introduced as an optional subject at the degree level.

Further, typewriting, tailoring, dancing, Veena and Vocal music classes are proposed to be started.

NBT rural writers workshop

"There is urgent need to inculcate reading habit not only amongst rural youths but also amongst rural adults who have begun learning at a later stage in life. This was most imperative in areas where the media has not reached so far", said recently Mr. L.D. Kataria, Vice-Chancellor, Haryana Agricultural University (HAU) at Agroha, 22 km. from Hissar. He said that the farmers being the spinal cord of the nation need to be informed through suitable reading material. He said that for spreading literacy it was essential to produce need based reading material with attractive illustrations.

Mr. Kataria was inaugurating a seven-day workshop for rural writers organised by the National Book Trust of India (NBT) in collaboration with HAU. Mr. Kataria complimented the National Book Trust for its efforts to produce interesting and useful regional literature..

Dr. Lok Nath Bhattacharya, Director of NBT, who presided over the function disclosed that this was the 4th in series of such workshops in which rural writers were invited to select and write on themes of regional interests. Such workshops have already been organised in Gujarat, Orissa, Andhra Pradesh and Madhya Pradesh, Dr. Bhattacharya presented a set of books to Mr. L.D. Kataria. Earlier Dr. J.N. Chand, Director of Publications said that in view of the similarities in the objectives of NBT and HAU. i.e. transferring information to the rural masses, this collaboration between the organisations would be further strengthened.

20 rural writers participated in the workshop. The workshop covered a wide area of Haryana's folk lore and culture. About 7-10 books will be published under this programme. The objective of the workshop was to scan and produce complementary reading material for the neoliterates and the adult learners.

Panel to study setting up of Medical Varsity in Karnataka

The Minister of State for Health, Karnataka, recently revealed in the Legislative Council of the State that the State Government has decided to set up an experts' committee to consider formation of a separate university for medical colleges in the State. The Committee would comprise experts from the State and national level, it was further stated.

Bill to ban capitation fee

The University Grants Commission (Amendment) Bill 1984, introduced in the Rajya Sabha on March 23, 1984 seeks to empower the University Grants Commission (UGC) to ban capitation fee levied by private colleges, especially engineering colleges.

CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/ Seminar/Symposium/ Workshop	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks
May 6-8, 1984	Village Festival on Traditional Theatre forms and Seminar on Performing Arts.	School of Drama, University of Calicut, Calicut.	Director, School of Drama of the University.	Dr. (Mrs) Kapila Vatsyayan will be chief guest.
April 17-May, 5, 1984	ICAR sponsored Summer Institute on Recent Techniques in Seed Science & Technology.	Division of Seed Science & Technology, IARI, New Delhi.	Dr. P.K. Agarwal, Head & Project Director.	
May 2-26, 1984	ICAR sponsored Summer Institute on Approaches to Research & Development of drylands on watershed basis.	All India Coordinated Research Project for dryland agriculture, Santoshnagar, Saidabad, Hyderabad.	Dr. R.P. Singh, Project Director.	
May 7-26, 1984	ICAR sponsored Summer Institute on Appropriate Technology for Agricultural Development in Tribal areas.	Punjabrao Krishi Vidyapeeth, Akola	Dr. B. G. Bathkal, Director of Research.	
May 2-22, 1984	ICAR sponsored Summer Institute on Water Management practices for Humid tropics.	Centre for Water Resources Development & Management Campus, Kozhikode	Dr. V.K. Vamadevan, Head.	
May 7-31, 1984	ICAR sponsored Summer Institute on Methods of Project Planning, Monitoring and Evaluation.	Department of Agril. Economics, CARDS, Tamilnadu Agril. University, Coimbatore.	Dr. P.K. Aiyasamy, Prof. & Head.	

The Bill seeks to empower the UGC to determine the amount of fees charged by colleges and to deny grants or derecognise any college which violates the provision.

The Bill also provides for an inquiry before derecognition of a college and for taking care of the interests of the students already enrolled in the college.

Six lacs grant to HAU

Shri T.K. Sinha, Chief General Manager of State Bank of India, Chandigarh Circle, recently presented a grant of Rs. 6 lacs to the Vice-Chancellor, Shri L.D. Kataria, Haryana Agricultural University (HAU) Hissar, for setting up 'Centre for Rural Development Studies' at University at a function organised in the university. While presenting the grant Shri Sinha said that this grant will help the university in opening another channel in rural development. On this occasion he explained that research and development fund was constituted in 1977 with an initial corpus of Rs. 5 crores set apart from Bank's profits for the year 1976, for supporting projects in the fields of rural, agricultural, industrial and entrepreneurial development and for providing vocational training to the physically handicapped and the projects for vocational and professional training to unemployed persons to equip them with desired skills.

While accepting the grant, Shri L.D. Kataria said that the centre would conduct research studies on socio-economic segments of rural life and identify the existing gaps in the transfer of technology and draw out action plan. He further said that the centre would also take up all the on-going integrated rural development programmes of HAU for their overall developments. He disclosed that HAU has already got distinction by speeding up the implementation of 20-point programme.

News from Agril. Varsities

HAU mini Kisan Mela

A mini Kisan Mela was organised recently by the Directorate of Extension Education of Haryana Agricultural University (HAU) at village Kumaharian, 35 kms. from Hissar. More than 2500 farmers and farm women attended the fair.

Addressing the audience, Dr. D.S. Bhatti, Director of Extension Education, said that Haryana State was leading in the organisation of such mini kisan melas. These melas organised by HAU, he said, are much more beneficial to the women folk than to the men-farmers because women in rural areas are reluctant to go out of their village precincts". This was one reason that more than 500 women of different age groups attended the mela at Kumaharian, and participated actively in the various competitions.

Smt. Indira Bishnoi, Member of the Board of Management of HAU, who was the chief guest on the occasion advised the Home Science Extension staff to evolve local recipes so that the locally available material could be used. She pleaded to the village women to learn knitting on the flat knitting machine so that they may not only knit for themselves and the members of their families but also adopt this as a part time vocation.

On this occasion an infertility-cum-clinical camp was also organised. In it more than 70 animals were provided with a proper line of treatment by the experts from the Colleges of Animal and Veterinary Sciences. The cows and buffaloes suffering from reproductive disorders were examined.

The village, which has been adopted under the lab to land programme by the university, has already become a nucleus of modern farming techniques which have been willingly adopted by the farmers there. According to Dr. P.L. Sachan, Coordinator of the Krishi Gyan Kendra, Hissar, ever since the village was adopted by the Kendra the production in various crops has gone up noticeably. In wheat, after the guidance provided to the farmers of this village the yield has gone up from 30 quintals per hectare to about 40-45 quintals per hectare. In gram it has gone up from 10 quintals per hectare to 18-20 quintals per hectare. The scientists have also disseminated technology about production of mustard. In this crop the rise has been from 12 quintals per hectare to about 20 quintals per hectare.

The mela proved to be useful point of interaction between the farmers, scientists and input and medicine dealers who put their stalls for fertilisers, vety. medicines, sowing machines and hand and bullock drawn agriculture implements. In the exhibition that was arranged for this occasion there were exhibits of seeds and fertilisers, fruits and vegetables, clothes and smokeless chullah etc.

This was the first mela of the session in which besides the staff of the Directorate of Extension all the five departments of the college of Home Science also participated actively.

Competitions in field crops, livestock and in ploughing were also organised to attract more farmers to benefit from this congregation of scientists and extension personnel.

Seminar on animal production

"To tackle the day-to-day problems of livestock in a scientific way there is urgent need to encourage development of specialised centre of fundamental research in different parts of the country. For this purpose agricultural universities are the best suited centres because of their congenial academic climate to do so," said Mr. L.D. Kataria, Vice-Chancellor, Haryana Agricultural University (HAU) recently while inaugurating the all-India Seminar on "Role of Anatomy in Production and Reproduction of Farm Animals."

Mr. Kataria further said that scientists should update their techniques by further research so that work on white revolution could be speeded up. Referring to good animal husbandry techniques like good breeding, care and management and strict disease control measures, Mr. Kataria said that these practices are possible only when the structural and functional norms of livestock are well understood.

A total of 50 delegates took part in the three-day seminar.

Avian Revolution

Following a decade of research on 14 White Leghorn layer strains for eggs and 13 broiler strains for meat, the Central Avian Research Institute (CARI) — Research & Education wing of the Indian Council of Agricultural Research located in the campus of Indian Veterinary Research Institute at Izatnagar, U.P. — have brought about an Avian revolution in the country by developing and commercially introducing an exotic egg layer and a chicken broiler, according to its Director, Dr. B. Panda.

The CARI has also successfully developed and introduced the Japanese quail in India through a UNDP-ICAR project.

Consequent on the success achieved, India has stopped, with effect from March last year, import of germ plasm to meet the demand of the Indian poultry industry.

The CARI has now been recognised as a UNDP Centre of Excellence in poultry science for postgraduate research, education and training in South East Asia.

The chicken egg layer now developed is known as the Indian Layer Izatnagar (ILA). It is reported to lay around 220 to 260 eggs in its life time of about 500 days.

Sports News

DSJA honours sport stars

It was a proud moment for India's pugilist, Kaur Singh, heavyweight gold medalist at the 1982 Asian Games when he received the J.D. Tytler Trophy for the best sportsman from world billiards champion, Michael Ferreira at the Delhi Sports Journalists Association annual awards function on 25th March 1984.

The Air India trophy for the best sportswoman of 1982 was presented to 19-year old Rajbeer Kaur, who spearheaded the Indian women's hockey team to gold at the Asiad, by Master Chandgi Ram.

Mohammed Naim of Indian Airlines got the S.S. Prakash trophy for the most promising junior of 1982. The trophy was presented by veteran athlete and Rhodes Scholar Ranjit Bhatia.

The Triple 'C' trophy for the best team was given by Charles Borromeo, the Asian Games Gold medalist in 800 metres, to the Punjab hockey team, who have won the National title 15 times, the last time being in 1983.

India's hockey skipper and outside left Zafar Iqbal got the H.B.S. Richie Trophy for the best hockey player of 1982. He received the award from another hockey great, Charanjit Singh, skipper of the 1984 Olympic team.

India's ace woman athlete 21 year-old P.T. Usha, of Railways, who claimed two silver medals at the Asiad and also the 400 metres Gold in the fifth Asian track and field meet, received the prestigious B.C. Saxena Trophy for valour and fairplay. The trophy was presented to her by Swami Jagan Nath, manager of the Indian hockey team in the 1936 Olympics.

The function was attended by the leading sports personalities of the Capial.

Workshop for tennis coaches

Over 30 coaches from all over the country will be attending the week-long workshop to be conducted by Mr. Doug Maccurdy, chief coach of the International Tennis Federation in New Delhi. It could provide much needed impetus to what the All India Lawn Tennis Association labels as its "programme of the talent development for future champions."

One of the points of the talent development programme, formulated last year and submitted to the Department of Sports in December, was the training of Indian coaches by a foreign expert in preference to sending selected junior players abroad to be trained there or asking Indian coaches abroad to return and take up domestic assignments.

AILTA's efforts to get a top class coach succeeded when ITF said that Doug Maccurdy, who was in India for a short while three years ago, would be available for a weekend during a tour of Pakistan, Bangladesh and Sri Lanka. A change in his programme and AILTA's insistence on a longer stint resulted in the forthcoming workshop to be held from April 9 to 13 at the DLTA complex.

Dr. G.M. Sivasankar passes away

Dr. G.M. Sivasankar, Director of Physical Education, Bangalore University, Bangalore breathed his last on 23rd March, 1984. Dr. Sivasankar was a qualified and experienced Sports Adminitrator amongst universities. He had been very closely associated with the sports activities of this Association. In his death, this Association has lost a very long associate who contributed with his matute expertise in the field of sports and games.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

HUMANITIES

Philosophy

1. Bedi, Neelam. *Liberation and social action : An analysis.* Pb U, Chandigarh.

2. Rukmabai, Babasaheb Guru. *Madhya yugeen Krishna bhakti sadhna ka sameekshatmak vivechan.* Meerut U.

Religion

1. Daśwani, Rekha. *Buddhist monasteries and monastic life in Ancient India, third century B.C. to the seventh century A.D.* U Raj, Jaipur.

2. Kapoor, Sukhbir Singh. *Guru Gobind Singh's concept of an ideal man.* Pb U, Chandigarh.

Fine Arts

Drawing & Painting

1. Ash, Nirban. *Colour properties and their propensity and problems in painting.* RBU, Calcutta.

2. Bhati, Saroj. *Basohali chitra-shaili kee kalagat sameeksha.* Meerut U.

3. Garg, Prem. *Bikaner ke laghu chitron mein shaili evam taknik ka vikas* Meerut U.

4. Miran, Usha. *Prachin Bhartiya bhitti chitron ka tatkaleen kalashastra evam sahitya ke pariprekshya mein ek adhyayan: Doosri shati isvi poorva se barhaveen shati tak.* Meerut U.

5. Verma, Rameshwar. *Artistic representation of gods and goddesses in Indian miniature painting from 15th to 18th century.* Kanpur U.

Music

1. Bhandawat, Prabha. *Ustad Allaudin Khan ka Bhartiya sangeet ke vikas mein yogdan.* U Raj, Jaipur.

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Associate Professor:

(a) Good academic record with a doctoral degree or equivalent published work. Evidence of being actively gaged work.)Evidence of beig actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

(b) About five years' experience of teaching and/or research provided that at least three of these years were as Assistant Professor/Lecturer or in an equivalent position.

Assistant Professor

(a) A Doctorate degree or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale). Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or not considered suitable, a person possessing a good academic record, (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increment until he fulfils these requirements.

Special Officer (Development)

(i) Degree in Engineering, (ii) At least 5 years' experience in a position not below the rank of Assistant Engineer or equivalent in the Government or any Institution.

Specializations for Teaching Posts

1. ***Professor in***

(i) **Life Sciences:** Genetics; Fishery: Plant Physiology; Ecology; Plant Pathology; Entomology.

(ii) **Chemistry:** One post in any branch of organic chemistry preferably in natural product chemistry, and one in physical/inorganic chemistry.

(iii) **Earth Sciences:** Physical Geology/Geophysics.

(iv) **Anthropology:** Prehistory/Social/Cultural-Anthropology/Physical Anthropology.

(v) **Economics:** Industrial Economics/Development Economics.

(vi) **Political Sc:** Political Theory and Thought.

(vii) **History:** Regional History

(viii) **Hindi:** Prachin Kavya/Bhakti Kavya/Riti Kavya/Katha Sahitya/Natya Sahita/Bhasa Vigyan/Adhunik Kavya/Kavya Shastra

(ix) **Manipuri:** One post in (A)(i) Modern Manipuri literature, (ii) Criticism and Western Literature particularly English, (iii) Folk literature and folklore of Manipur and/or (B.) (i) old and Mediaeval Literature of Manipur, (ii) Manipuri History and Culture, (iii) Modern Manipuri Literature.

And other post in Linguistics and/or Anthropology with research experience relevant to Manipuri studies.

(x) **English:** English Linguistic and/or English language teaching.

2. **Associate Professor in:**

(i) **Life Sciences:** Genetics; Fishery; Plant Physiology; Ecology; Plant Pathology; Entomology; (one post in Plant Pathology, if available).

(ii) **Physics:** Solid State Physics.

(iii) **Chemistry:** One in Inorganic and the other in Analytical chemistry.

(iv) **Mathematics:** Relativity.

(v) **Economics:** Demography/Public Economics/International Trade.

(vi) **History:** (i) Ancient Indian History, (ii) Medieval Indian History.

(vii) **English:** Commonwealth Literature and/or Indian Writing in English.

(viii) **Hindi:** Prachin Kavya/Bhakti Kavya/Riti Kavya/Katha Sahitya/Natya Sahitya/Bhasa Vigyan/Adhunik Kavya/Kavya Shastra/Tulnatmak Sahitya/Lok Sahitya.

(ix) **Manipuri:** Two posts in (i) Comparative literature/Arts, Culture and music forms of Manipur, (ii) General linguistics with specialisation in Tibeto-Burman/Comparative literature.

And other two posts in (i) Manipuri Folklore, (ii) Manipuri Linguistics

(x) **Earth Sciences:** One post in Physical Geography/Meteorology/Climatology and one post in Geohydrology/Petrology/Sedimentology.

(xi) **Anthropology:** Prehistory/Social/Cultural Anthropology/Physical Anthropology.

(xii) **Commerce:** One post in Accounting and one post in Business Administration & Management.

3. **Assistant Professor in**

(i) **Life Sciences:** One post each in

Plant Pathology, Plant Physiology, Fishery and Biological Statistics.

(ii) **Physics** : One post in Electronics.

(iii) **Chemistry** : One in Physical/Organic/Inorganic Chemistry and the other in Bio-chemistry.

(iv) **Mathematics** : Statistics.

(v) **Earth Sciences** : One in Physical Geology/Geophysics and one in Physical Geography/Meteorology/Climatology.

(vi) **Anthropology** : Prehistory of South & East Asia/Physical Anthropology/Anthropological Ecology with special emphasis on the Himalayas/Social/Cultural Anthropology with special emphasis on transformation of Tribal Societies in India.

(vii) **Commerce** : One post in Business Administration and Management.

(viii) **Economics** : Agricultural Economics / Demography / Econometrics / Banking.

(ix) **Political Sc.** : Political System and Analysis, Modern Indian Political Thought, International Politics/Govt. and Politics in Modern Nations (U.S.A., U.K., U.S.S.R., China, Japan, France).

(x) **History** : Ancient Indian History.

(xi) **Hindi** : Prachin Kavya/Bhakti Kavya/Riti Kavya/Katha Sahitya/Natya Sahitya/Kavya Shastra/Tulnatmak Sahitya.

(xii) **Manipuri** : Manuscriptology/Manipuri Literature.

(xiii) **English** : One in English Language teaching and one in English Literature.

Candidates invited for interview for posts of Professors will be given first class railway-fare as T.A. from the place of origin to Calcutta or Gauhati and air-fare from Calcutta or Gauhati, as the case may be, to Imphal for both ways, and for other teaching posts, second class railway-fare from the place of origin to Calcutta or Gauhati and air-fare from Calcutta or Gauhati, as the case may be, for both ways, on production of travel documents. Candidates invited for the post of Special Officer (Development) will be given second class railway-fare from the place of origin to Imphal and back on production of travel documents.

How to Apply :

Applications, in plain paper (duplicate), with attested copies of certificates in support of qualifications and experiences showing candidates' names; dates of birth; nationality; postal/permanent addresses; father's name; academic and professional attainment; experience, field of specialization; publications/research projects undertaken; details of visits to foreign countries and the names and addresses of at least two persons well acquainted with the candidates' professional work should reach the Registrar, Manipur University, Imphal-795003 on or before **26-4-1984.**

Applications received late or incomplete in any respect may not be entertained. Separate applications alongwith the enclosures are required to be submitted in case a candidate intends to apply for more than one post. Persons already in service must apply through their employers so as to reach this office on or before the last date fixed. It will be open to the University to consider names of suitable candidates who may not have applied. The posts at Sl. Nos. 1 (xi & xii) are being re-advertised. The qualifications for these posts as advertised vide Advertisement No. 5 dated **5-4-83** have been modified. However those who applied earlierfor these posts need not aply again. Their previous applications will be considered, if they fulfil the modified qualifications.

ALIGARH MUSLIM UNIVERSITY

ALIGARH

Advertisement No. 38/83-84

Applications on the prescribed form are invited for the following posts:

Faculty of Medicine

1. **Reader in Radiology, Department of Radiology**

Scale of pay : Rs. 1200-50-1300-60-1900 plus allowances.

Qualifications : M.D./M.S. (Radiology).

Teaching/Research Experience : As Lecturer in Radiology for five years in a Medical College.

2. **Lecturer in Radiology, Department of Radiology.**

Scale of pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications : M.D./M.S. (Radiology).

Lecturer in Physiology, Department of Physiology

Scale of pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications

I-Essential : M.D. (Physiology) M.B.B.S. with M.Sc. (Physiology) Ph.D. (Medical Physiology) D.Sc. (Medical Physiology).

II-Desirable: Original research publications in the speciality in Indian and foreign journals.

4. **Lecturer in Bio-Chemistry, Department of Bio-Chemistry.**

Scale of pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications: M.D. (Bio-Chemistry) M.B.B.S. with M.Sc. (Medical Bio-Chemistry) Ph.D. (Medical Bio-Chemistry) D.Sc. (Medical Bio-Chemistry).

Note: The Selected candidates will be responsible for organising Clinical Bio-Chemistry Section as well as for conducting courses in Medical Bio-Chemistry for M.B.B.S. and M.D. classes.

5. **Lecturer in Anatomy (Histology), Department of Anatomy**

Scale of pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications

I-Essential: M.S. (Anatomy), M.B.B.S. with M.Sc., (Anatomy), Ph.D. (Medical Anatomy), D.Sc. (Medical Anatomy).

II-Desirable : Published work/research experience in the field of Histology.

6. **Lecturer in Microbiology, Department of Microbiology.**

Scale of pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications

I-Essential : M.D. (Bacteriology)/M.D. (Microbiology) M.D. (Bacteriology with Pathology) M.D. (Pathology & Bacteriology) M.B.B.S. with M.Sc. (Medical Bacteriology)/M.Sc. (Medical Microbiology) Ph.D. (Medical Bacteriology)/Ph.D. (Medical Microbiology) D.Sc. (Medical Bacteriology)/D.Sc. (Medical Microbiology)

II-Desirable : Teaching experience in Microbiology.

7. **Lecturer in Neuro-Psychiatry, Department of Medicine.**

Scale of pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications : M.D. (Psychiatry), M.D. (Psychological Medicine), M.D. in Medicine with Diploma in Psychological Medicine.

Faculty of Engineering & Technology

8. **Reader in Civil Engineering, Civil Engineering Section, University Polytechnic**

9. **Reader in Mechanical Engineering, Mechanical Engineering Section, University Polytechnic.**

Scale of pay : Rs. 1200-50-1300-60-1900 plus allowances.

Qualifications : Good academic record with a Doctor's degree in a relevant field. About five years experience of teaching and/or research and development.

Provided further that candidates not possessing Ph.D may be considered if they have to their credit equivalent research published work or design/development work of a high order either in the Institution or in an industry.

OR

In the case of persons to be recruited from industry or professional fields, candidates should possess good academic record with recognised professional work of about 7 years which should include innovation and/or research and development.

10. **Lecturer in Civil Engineering, Civil Engineering Section, University Polytechnic.**

Scale of pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications : (a) Master's degree in appropriate field in Engineering/Technology.

(b) Consistently good academic record with a Bachelor's degree in Engineering/Technology. First class at Bachelor's degree and/or Master's degree level.

(c) One year's relevant professional experience outside academic/research Institution

Having regard to the requirements of emerging fields of Engineering and Technology of developing inter-disciplinary programmes the requirements of Engineering/Technology degrees may be waived in the cases of otherwise well qualified candidates.

Provided further that if a candidate does not possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of five years of his appointment failing which he will not be able to earn future increments until he fulfils this requirement.

If the candidates with M.Tech./ M.E. qualifications are not available or not found suitable for appointment the essential qualifications may be relaxed and first class Engineering Graduates may be appointed subject to the condition that the candidate concerned shall have to obtain the M.Tech./ M.E. degree within a period of five years failing which he will not be able to earn future increments until he acquires the prescribed qualifications.

Higher initial start may be given to candidates possessing exceptional qualifications and experience. Candidates interviewed may be paid contribution towards their T.A. equal to one single second class Railway fare only.

Prescribed application forms and instructions may be had from the Assistant Registrar (Selection Committees) Registrar's Office, A.M.U.. Aligarh on payment of lump sum amount of Rs. 5/- in cash (to be deposited in the Cash Section, Finance Officer, A.M.U. Aligarh) or through an Indian Postal Order payable to the Finance Officer, A.M.U., Aligarh either personally or by sending a self-addressed stamped envelope of 23 x 10 cm **Last date for receipt of applications is 30th April 1984 (upto 4.00 P.M. only). Incomplete applications and those received late will not be considered**

Note: **Suitable persons may be kept on panel for future appointment.**

Zamir Ahmed Khan
REGISTRAR

JAMIA MILLIA ISLAMIA

Jamia Nagar, New Delhi-110025.

Advt. No. 1/1984-85

Applications on the prescribed form which can be had from the Registrar's Office on any day (except Sunday and Holiday) between 10.00 a.m. and 12.00 noon or by sending a self addressed and stamped (50 paise) envelope of 10 x 23 cms. are invited along with crossed Indian Postal Order or Bank Draft of Rs. 5/- for posts carrying a maximum grade upto Rs. 400/- per month and Rs. 7/- for posts carrying a grade exceeding Rs 400/- per month (Rs. 2/- for SC/ST candidates irrespective of grades) for the following posts so as to reach the Registrar by 1.00 p.m. on **26-4-1984.**

Ability to teach in Urdu and Hindi is a desirable qualification for teaching posts and adequate knowledge of Urdu and Hindi is essential for non-teaching posts.

D.A., C.C.A., H.R.A., P.F., Gratuity, Pension and other benefits will be given as per Jamia rules

Relaxation in any of the qualifications may be made on the recommendation of the Selection Committee in exceptional cases.

1. **Three Professors (Grade : Rs. 1500-2500) One each in Mathematics, Geography (Permanent) and One in Political Science (Temporary but likely to continue).**

An eminent scholar with published work of high quality actively engaged in research. About ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

For Professor in Geography degree or diploma in remote sensing and photo-interpretation is a desirable qualification.

2. **Seven Readers (Grade : Rs 1200-1900) One each in Geography, Physics, Chemistry, Mechanical Engineering (Permanent), Education (Temporary likely to be made permanent) One in Economics (leave vacancy) and One in Medieval Indian History (Temporary).**

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years experience of teaching and/or research provided that at least three of these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record of Teaching/ Research.

For the posts of Reader in Geography diploma or certificate in remote sensing and photo-interpretation is a desirable qualification.

3. **Nine Lecturers (Grade: Rs. 700-1600) two in Geography, one each in Urdu, Physics, Chemistry (Permanent), English, Arabic, Sociology (Temporary likely to be made permanent) and One in English (leave vacancy).**

(a) A Doctorate's degree or research of an equally high standard; and

(b) Good academic record with atleast second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign university.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increment until he fulfils these requirements.

For the posts of Lecturers in Geography, Mathematical Geography at post graduate level is a desirable qualification.

For the post of Lecturer in Sociology experience in teaching/training in applied Social Sciences projects is a desirable qualification.

4. **One Lecturer in Education (Physics) Grade : Rs 700-1600 (Permanent).**

(a) A Doctor's degree in Education or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign university.

OR

(a) A Doctor's degree in any university discipline or research work of an equally high standard; and

(b) Good academic record with an M. Phil degree in Education (which may be acquired while in service) from an Indian University or an equivalent degree from a foreign university.

Having regard to the need for developing interdisciplinary programmes, one of the degrees in (a) and (b) above may be in relevant subjects, the other being in Education.

Provided that if the Selection Committee is of the view that the Research work of a candidate as evident either from his thesis or from his published work is of very high standard it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within eight years of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

5. **Two Lecturers (Grade : Rs. 700-1600) One each in Art Education and Dramatics (Permanent).**

(a) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject or an equivalent degree or diploma recognised by the University and

(b) Two years research or professional experience or evidence of creative work and achievement in his field of specialisation or a combined research and professional experience of three years in the field as an artist of outstanding talent.

OR

A traditional or a professional artist with highly commendable professional achievement in the subject concerned.

The Lecturer in Dramatics will be required to work in the Departments (i) Fine Arts and Art Education, (ii) Social Work, (iii) Mass Communication Research Centre and (iv) Schools.

6. **One Project Officer (Population Education) Grade : Rs. 700-1300.**

(1) Master's Degree in Population Education/Demography or Social Science with specialization in Demography with experience of Population Education and/or Family Plannng Education.

7. **One Administrative Officer (Grade: Rs. 700-1300) Permanent.**

Essential : A Second Class Master's Degree with 10 years' office experience of which at least 5 years should be in a supervisory capacity.

Educational qualification may be relaxed in case of an exceptionally meritorious candidate holding bachelor's degree.

8. **One Section Officer (Grade : Rs. 550-900 likely to be revised to Rs. 650-1200), Permanent.**

(1) A second class graduate, (2) 8 years experience in a post of Assistant or equivalent in an Office of repute, (3) Proficiency in noting and drafting in Urdu and English.

Desirable : Knowledge of Hindi.

9. **Seven Instructors (Grade : Rs. 550-900) two each in Electronics, Refrigeration & Air-conditioning and one each in Surveying, Drawing, Mechanical Engineering (Heat Engine & Mechanical Drawing) Permanent.**

(i) Diploma in concerned branch of Engineering.

(ii) Two years' teaching/professional experience.

10. **One Instructor in Science (Physics & Chemistry) Grade : Rs. 550-900 (Permanent).**

Degree in Physics & Chemistry from a recognised university with at least two years teaching experience. Preference will be given to a Post Graduate degree holder in the subject concerned (Physics/Chemistry).

11. **One Workshop Instructor in Welding & Sheet Metal (Grade : Rs. 440-750) leave vacancy.**

Matric or Secondary School Certificate with Certificate in concerned Trade awarded by NCTVT and 3 years' experience in the concerned Trade.

OR

Matric with 7 years' practical experience with the Trade concerned.

12. **One Technical Assistant (Grade: Rs. 425-700) Permanent.**

(1) Graduate with Diploma/Certificate in Research Methodology including data processing, tabulation interpretation etc. Preference will be given to Master's degree holder in Social Work, Socioiogy or Economics.

13. **One Compounder (Grade : Rs. 330-560) Permanent.**

(a) Matriculation or its equivalent, (b) Must have passed the Pharmacists (Compounder's) Course from a recognised Institution and must be a registered pharmacist as required under the Pharmacy Act, 1948. (c) Two years' experience in a hospital. (d) Adequate knowledge of Urdu and Hindi.

14. **Two Junior Engineers (Grade : Rs 425-700) Civil, One permanent and One temporary likely to be made permanent.**

(1) Certificate of 3 years' Diploma in Civil Engineering from the recognised Institution.

(2) Minimum two years field experience.

(3) Working knowledge of Urdu, Hindi and English essential.

15. **One Editorial Assistant (Rs. 700/- per month fixed likely to be revised).**

Essential : At least second class degree of a recognised University with Fazil degree from an Arabic Madarsa like Darul-Uloom, Deoband OR Nadwatul-Ulama of Lucknow.

Desirable: At least three years' experience in literary Urdu Journalism, printing and publishing.

16. **One Cleaner : Grade : Rs. 196-232) temporary likely to be made permanent.**

At least VIII Class passed.

STATE RESOURCE CENTRE, JAMIA (Temporary but likely to continue).

17. **One Director/Coordinator (Salary Rs. 1800/- per month consolidated).**

(1) First/Second Class Master's degree.

(2) Experience of ten years in Administration, Extension Education, Material Production and training of Adult and other extensive workers.

(3) Experience of working with community groups or voluntary organizations.

18. **Four Incharges : One each in Training, Materials (Salary Rs. 1500/- per month consolidated) and General Activities, Follow-up Programme/Evaluation (Salary Rs. 1200/- per month consolidated).**

(1) A good university degree.

(2) Experience of five years in community work, Extension Education or voluntary organizations.

(3) Experience of work in the relevant field.

19. **One Training Associate, One Associate (Materials) Rs. 1000/- P.M. consolidated and one Supervisor (Rs. 800/- p.m. consolidated).**

(1) A good university degree.

(2) Experience of two years of work in the relevant field.

20. **One Artist (Rs. 1000/- p.m. consolidated).**

(1) An Artist with experience in Art Education and Adult & Extension Education.

21. **Two Research Associates (Rs. 700/- p.m. consolidated).**

(1) A Second Class Graduate with at least one year experience in community work, extension education or voluntary organizations.

22. **One General Assistant (Rs. 700/- p.m. consolidated).**

(1) A Second Class Graduate with at least five years experience in the relevant field.

23. **Three Stenographers (Rs 700/- p.m. consolidated).**

(1) Matric with proficiency in typing with a speed of about 35 w.p.m. and proficiency in Shorthand with a speed of about 80 w.p.m.

24. **One Accountant-cum-Storekeeper (Rs. 700/- p.m. consolidated) and One Office Assistant (Rs. 650/- p.m. consolidated).**

(1) Graduate with good knowledge of Urdu, Hindi and English.

(2) Knowledge of typing, filing, accounts and stores.

25. **One LDC-Typist (Rs. 525/- p.m. consolidated).**

(1) Matric with typing speed of 35 w.p.m.

(2) Knowledge of Urdu, Hindi and English.

(3) Previous office experience.

26. **Peon/Messenger, Machine Operator/Daftri (one each) Rs. 300/- p.m. consolidated.**

(1) Middle Class with previous experience and/or knowledge of filing, stitching of papers and cyclostyling.

27. **One Chowkidar (Rs. 300/- p.m. consolidated).**

Ex-service man will be preferred.

NOTE

(1) 12.5% non-teaching posts shall be filled from amongst members of the Scheduled Castes and 5% from amongst the members of the Schedued Tribes.

(2) The number of vacancies given in the advertisement above are liable to be changed without notice by the University.

Ikram Husain Khan
REGISTRAR

ADVERTISEMENT

Applications are invited from candidates holding doctorate degree in Chemistry (with M.Sc. in Physical Chemistry) for the Post of Research Associateship, Rs. 1300/- P. M. (Fixed) to work in a DST sponsored research Scheme "Molecular/Interactions in Vapour Phase", under the supervision of Dr. S. N. Bhat. The Candidates should have at least two years post doctoral experience in the relevant area/ Electronic Spectroscopy. The Application containing the name, date of birth, academic bio-data, names and address of the two referees should reach, **The Head Chemistry Department** North Eastern Hill University, Bijni—Complex, Laitumkhrah, Shillong-7930 3, on or before **30th April 1984**. Those who have submitted their Thesis may also apply and such persons should intimate the results as soon as they are announced. In case fresh Doctorate candidates are to be appointed, then they may be offered Rs. 1100/- P. M.

A. Patton
REGISTRAR

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University News

PRIL 16, 1984

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Food Science & Technology
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REGISTRAR
VICE-CHANCELLOR

Prof. K. M. Chandy, Governor of Gujarat, delivering the Convocation Address at the Gujarat Ayurved University, Jamnagar. Seated on his right are : Prof. V. J. Thakar, Vice-Chancellor and Shri A. H. Mehta, Acting Registrar of the University.

CLASSIFIED ADVERTISEMENTS

UNIVERSITY OF JODHPUR

(Establishment Section)

Advertisement No. 152/84

Applications are invited for appointment on the following posts in the University of Jodhpur in the scales of pay as mentioned against each plus other allowances as admissible under University rules:

1. **Deputy Registrar :** Two (plan posts) (Scale : Rs. 1500-50-1800-60-2100-75-2250)

Qualification

Essential

(a) First or high Second Class Postgraduate degree.

(b) At least seven years administrative experience in a position involving supervision, control and planning.

OR

Seven years teaching experience in a University or a Post-graduate College.

Desirable

(i) Familiarity with the life and working at a university or with educational administration in a College, University or an Institute or Higher learning or research.

(ii) A degree or a Diploma in management of Law.

(iii) Experience of teaching in a College or University.

(iv) Thorough experience of Establishment Section, conducting examinations in a University/Board of Secondary Education or a comparable Institution/experience of University Development Planning and Project work, and familiarity with UGC Schemes.

Note

Persons already working in a University as Asstt. Registrar for at least 4 years and possessing a minimum total administrative experience of 10 years could be considered eligible for the post. Experience in the cadre of Section Officer or equivalent posts and above will be counted as administrative experience.

2. **Astt. Registrar :** (3 permanent and 1 plan post) (Scale : Rs. 1000-30-1300-40-1500-50-1800-60-1860)

Qualification

(a) Bachelor's Degree from a recognised University.

(b) Experience of about 7 years in a supervisory capacity in a University, Board of Secondary Education, Educational Institute of repute or College of postgraduate standard.

3. **Professional Assistant:** (2 plan posts) (Scale: Rs. 780-20-900-25-1000-30-1300-40-1460)

Qualification

Graduate with degree or Diploma in Library Science with 7 years experience as Librarian.

Those who have applied against advertisement No. 63/81 dated 18 Nov. 81, 84/82 dated 27 Dec., 82, 14/83 dated 1 March 83, 29/83 dated 11 May, 83 and 126/83-84 dated 5 Jan., 84 for the post of Dy. Registrar and Asstt. Registrar need not apply again. However, only such candidates who fulfil the conditions of eligibility as laid down in Advertisement No. 63/81, 84/82, 14/83 and 29/83 for the post of Deputy Registrar and Assistant Registrar which were the same as are being advertised now, will be considered.

Higher starting salary may be given to exceptionally qualified candidates. The University reserves the right not to fill up the posts, if deemed necessary.

16% and 12% of the posts of Officers (Sl. No. 1 and 2) are reserved for Scheduled Castes and Scheduled Tribes candidates respectively).

No T.A. & D.A. will be given to the candidates who are called for interview.

Application forms for the above posts can be obtained from the office of the undersigned for which a crossed I.P.O. of the value of Rs. 5/- (Five) only, endorsed in favour of the Registrar, University of Jodhpur, payable at Jodhpur be sent alongwith a self-addressed envelope of 24× 11 cms size bearing postage stamps of Rs. 3.75 only.

The last date for receipt of applications complete in all respects is **15 May, 1984.**

P.S. Bhargava
REGISTRAR

PANJAB UNIVERSITY
CHANDIGARH

(Advertisement No. 4/84)

Applications are invited for the following posts so as to reach the Registrar, Panjab University, Chandigarh, alongwith postal orders of Rs. 10/- by **1-5-1984.** Fourteen days extra time is permissible to the persons who have to submit their applications from abroad.

1. **Professors :** (Rs. 1500-60-1800-100-2000- 125/2-2500).

Chemistry—1 (Chemical Education) (under COSIP-ULP)

Physics — 1 (Experimental Nuclear Physics)

Pharmaceutical Sciences —1 (Pharmacology).

2. **Readers :** (Rs. 1200-50-1300-60-1900).

Microbiology —2, Pharmaceutical Sciences-1, (Pharmacognosy). Nuclear Spectroscopy —1 (under UGC Special Assistance Programme, Department of Physics), Chemistry - 2 (Physical Organic Chemistry - 1, Physical Inorganic Chemistry - 1), Zoology - 1.

3. **Lecturers** (Rs.700-40-1100-50-1600) Biophysics - 1, Chemical Engineering & Technology - 1 (Mechanical Engineering).

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FOR DETAILS SEE INSTRUCTIONS FOR CANDIDATES ENCLOSED WITH THE APPLICATION FORM.

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Editor :

M.S. RAMAMURTHY

Restructuring of Our Education System —A View Point

S. S. Johl*

In nut shell, our education system demands restructuring on the following lines :

(1) The school education upto tenth class should be of general nature aimed at developing the basic personality of the student. Under our socio-economic and politico-cultural situation, the student must get proper orientation to the right values for a democratic political system, cooperative approach to work and living as well as a moral and ethical make up of the mind in order to sustain a purposeful life in the society.

(2) At plus two level the two streams i.e. vocational and academic, should carry students in 2:1 ratio. These two years in the vocational stream must prepare the student to face practical life after he leaves the school and should develop in him techniques, art and adequate skill to earn a gainful living. There should also be a provision for the students in the vocational stream to divert to the academic stream at a subsequent stage. In the academic stream the students should be prepared for higher studies. As for high school level we have Punjab State Education Board. This two-year schooling should be managed and administered by a separate Board of Higher Education with two wings, one administering the vocational stream and the other academic stream. They should have adequately equipped and competent academic council and other administrative bodies.

(3) At the plus 3 stage, the colleges should prepare the students coming from academic stream and those who divert from the vocational stream with extra courses, for higher learning at the University level. This should be a preparatory stage for University education. This stage should be administered by a State Board of College Education. This will economise on finances and will introduce uniformity in syllabi and will avoid the problems presently being faced by students seeking migration from one

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** Vice-Chancellor, Punjabi University, Patiala.*

university to another in the state. This Board should have its boards of studies in different subjects with membership from related departments of the three universities and the colleges as well as subject experts from outside. This board should also have an academic council to maintain academic standards as is being done separately by the three universities at present. With the establishment of this State Level College Educatton Board, the examination work of all the three universities whould shift to the responsibility of this body. The staff engaged at present for examination work can be pooled. Probably not more than half of this combined strength of staff in the three universities shall be needed for examination work under the control of the College Board.

(4) Education in the universities should be catered to at a higher level only i.e Master's degree, M.Phil and Ph.D. These universities should be primarily responsible for generating knowledge through research. The character of these universities must change to that of residential universities. With this system these universities will be able to introduce semester systems in right spirit with internal evaluation of the student performance in the class. Research will get its due place in such an integrated and responsive system.

(5) With respect to the postgraduate departments in the colleges they can be integrated with the university education at a later stage when these institutions mature enough to assume the responsibilities of semester system and consequent internal evaluation.

The introduction of semester system with internal evaluation in the universities would make the examination (evaluation) an essential part of the education process, wherein the evaluated answer books through multiple number of examinations (four or five in a Semester) will be returned to the students in the class and answers explained. The students will have access to the teacher for satisfying themselves on the marks or the grades obtained. This will induce an effective response between the teacher and the student and also will at the same time make the course work more flexible and responsive to the changing needs of the society and development of the subject.

(6) In order to make education learning oriented i true sense, it would be perhaps necessary t delink the job market from formal degrees Degrees should be considered only as a qualifying certificate. The jobs should be provided o competitive basis. Even for admission t professional courses like medicine, engineering law etc., it should be based on competitive entrance examinations. This will create an urg on the part of the students to learn and generate responsibility on the part of the teachers to deliver the education in a proper perspective.

(7) Another important related aspect is the cost of education. Under the scheme of reforms detailed above, it will be essential to match the cost of education with the value of the degree (s). Presently the education imparted does not entail much cost in real sense. It also does not have the value in the market as it should have. If the fees are raised adequately (say Rs 500/- per month for science subjects and 300/- for art subjects) the students who enter the colleges or the universities for higher education would be more responsible in class work and serious in obtaining full course education. In order to cater to the needs of serious scholars and also to the students who are economically handicapped such as scheduled castes and backward classes, there should be a liberal system of waiving the fees and awarding of scholarships. Maybe between 1/3 to 2/5th of the fees collected can be used for awarding scholarships and for other concessions to the deserving and economically handicapped students. This will introduce a desired level of responsibility on the part of the students who obtain merit or aid scholarships and fee concessions. This will also make those students who have to pay full cost of the education more serious in pursuing studies in the colleges/universities.

In this system the education upto 10th class should be free of cost, and may be through time made universal. At plus two level it should be at a reasonable low cost. At the plus 3 and university level, the student must meet full cost of their education, with of course a provision for assistance, concessions and scholarships for intelligent and serious students as well as for students who are economically and/or socially handicapped. ☐

F.T.R.I. MYSORE

AMU Seminar on Intra-Societal Tension and National Integration —Psychological Assessment

The Aligarh Muslim University, Aligarh, under the auspices of the Department of Psychology, organized a Seminar on "Intra-Societal Tension and National Integration — Psychological Assessment" on February 26-28, 1984.

The primary aim of the Seminar was to discuss objectively and scientifically themes of vital importance in the context of national reconstruction and the promotion of national unity and harmony.

Welcoming the chief guest, Prof. A.M. Khusro, Member, Planning Commission, Professor A. Jamil Qadri, Chairman, Department of Psychology, and Convener of the Seminar, referred to the contribution which social psychologists could, and should, make in the notional context. It was also brought to to notice that a centre or cell for studying the problems of minorities and underprivileged is being contemplated in the Department of Psychology.

In his inaugural address, Dr. Gopal Singh, ex-Chairman on the problem of minorities, pointed out that in reality, India was integrated. The vioce asking for rights and demands should not be misinterpreted as a voice of dissension Non-violent opposition and expression of dissatisfaction are in keeping with the spirit of democracy.

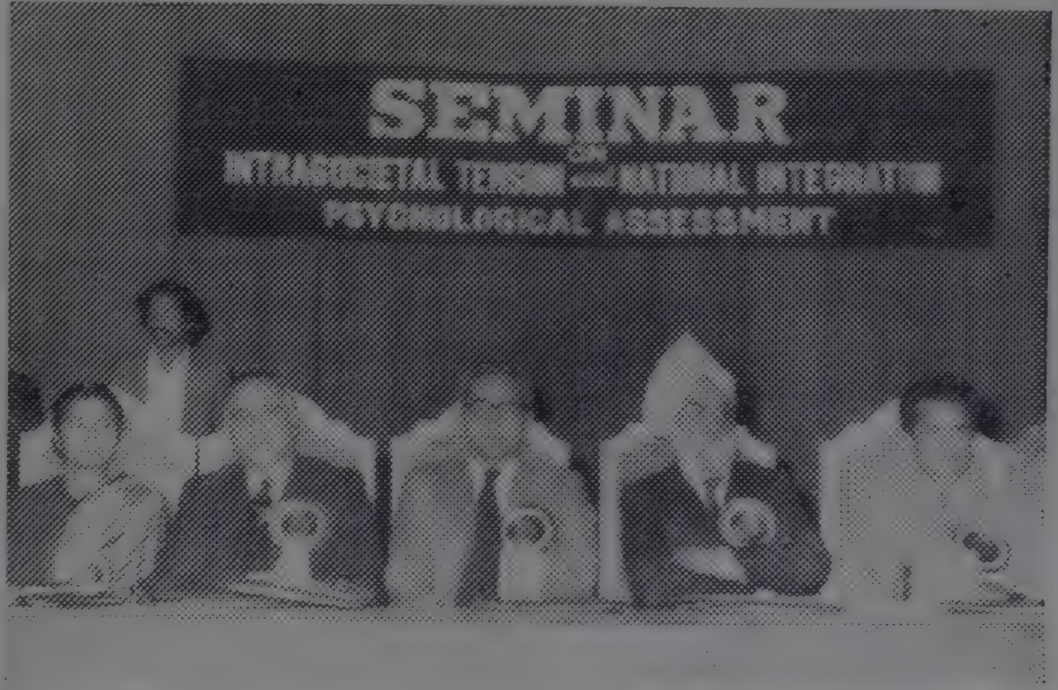
Professor A.M. Khusro felt that restricted loyalties created non-communicative vertical walls which spell tension and compartmentalization. Horizontal forces which cut across vertical barriers can remove tension. Industrial enterprizes and other activities which have unambiguous utility for all groups are examples of such endeavours.

The deliberations of the Seminar which spread over five sessions of discussions and presentation of papers were attended by psychologists from different parts of the country and academicians belonging to sister disciplines.

The Seminar focussed attention on bringing to the fore impirical and objective information regarding the diverse aspects of the issue of intra-societal tension and national integration. Consequently, the papers which were presented covered comprehensively areas such as language as a factor in national fragmentation, analysis of social distance among ethnic groups, educational strategies for the upliftment of scheduled caste students, nurturing the creative minority, regional conflict and the development syndrome, reactions and constraints to the demands of modernization, attitude change through understanding the stereotype, analysing if man is capable of peace and national integration achievable, psychological analysis of the youth dilemma, culture contact between Hindus and Muslims, unrest and dissatisfaction among Muslim workers in majority dominated enterprizes, social-psychological analysis of factors contributing to national harmony, non-violence and modern man, forging of a national identity.

There was unanimous appreciation of the fact that the process of socialization is a crucial process in the assimilation of attitudes, prejudices and value systems. Early childhood, therefore, has unimaginable significance. Without actual experience and life-testing, attitudes may be absorbed by the child to become lasting aspects of his mental framework. Consequently, together with the role of home and child-rearing practices, schools can play an important part by exposing the child to the correct type of experiences. Since schools are agencies that can be expected to comply with policies that are designed for some purpose and can therefore make a major contribution.

It was felt that though theoretically language is a means of communication and should not give rise to violence, the politicization of the language issue had resulted in aggressive na-



(From left to right) : Prof. (Mrs.) Kishwar Shabbir Khan, Dean, Faculty of Social Sciences, Prof. A.M. Khusro, Member, Planning Commission, Mr. Saiyid Hamid, Vice-Chancellor, Dr. Gopal Singh and Prof. Jamil Qadri, Chairman, Deptt. of Psychology at the inaugural function of the Seminar.

tionalism and tension. The importance of English as a link language was pointed out and concern expressed at its deteriorating standards. Besides a dispassionate rethinking of the three-language formula, it was suggested that a common script for all languages be evolved as this would result in the ultimate convergence of all languages. Roman as well as Devnagari were suggested as possible common scripts.

With reference to the persistence of misgivings amongst deprived and underprivileged groups, despite the fact that their interests were being genuinely promoted by concerned authorities, it was pointed out that a sense of involvement in the formulation and implementation of programmes was essential. Lack of involvement gives rise to misinterpretations which may seriously retard the success of such programmes.

Programmes for the upliftment of the deprived were applauded, but it was suggested that caution must be exercised not to inculcate dependency. Thus, measures adopted to safeguard the interests of the less privileged should ensure that initiative, self-responsibility, active participation and opportunities for positive, autonomous growth are not thwarted.

Many references to the problems related to modernization were made. It was pointed out that modernization is an integral part of social change and should be allowed to follow its natural course.

The role of urbanization and cosmopolitan living in lessening ethnic differences and bridging social distance was effectively brought out.

Re-orienting of housing system was also suggested. Strict demarcation of living areas in terms of a particular community should be discouraged. Residential proximity of different groups, though meeting with resistance initially, should be contemplated as this would be an effective means of providing opportunities for intimate, meaningful interactions, a feeling of sharing common joys and sorrows. From emotional integration would stem deep unity and harmony.

A comparative analysis of low-tension and high-tension areas revealed a large number of factors that distinguished them. In terms of value, tolerance level, perceptions and attitudes, people residing in low tension areas differed significantly from people residing in high tension areas. It was suggested that general factors and situation specific factors be isolated and studied. Meaningful education was emphasized as a means of reducing tension and prejudice by broadening vision and expanding the mental horizon.

The question of national identity was treated at length. It was pointed out that national identity does not mean identifying in terms of heritage of a particular cultural group. The term 'Indianization' implies that some groups deviate from the desired concept and need to be changed, giving rise to apprehensions and fears in certain ethnic and minority groups, which retards the process of the emergence of national identity. Identity, despite its diversities rests fundamentally on its amalgamated cultural ethos, its moral fabric being crystallized to a measure which is proportional to peoples' commitment to the national goals of a socialistic, secular democracy. National identity would assuredly evolve in time, but we can evolve measures to accelerate its pace.

Attitudes and prejudices exist in the minds of men and one of the best methods to prove the mind is the study of the stereotype. The stereotype unravels the degree of acceptance-rejection, positive or negative valance associated with a particular group. Since these attitudes are learned and can be changed through proper interpersonal contacts and experiences, the study of the stereotype has great functional utility.

In the final analysis, it can be said that the problem of national integration must be tackled in terms of a genuine, secular approach which keeps the various religious, linguistic, regional and cultural groups united in the fabric of a single nation. This view has been evolved over the years by a galaxy of nationalist leaders, saints, poets, social and religious reformers for whom the beauty of the Indian culture lies in its 'unity in diversity'. The feeling of belongingness binds all to form one composite culture.

Mr Saiyid Hamid, Vice-Chancellor observed in his valedictory remarks that the problem of Intra-Societal Tension is a very complex problem where a number of threads have got entangled. A scientific approach would mean that these threads are separated and each aspect studied objectively and the study sustained by a number of surveys. He added that insecurity gives rise to tension; fear breeds hatred; frustration leads to alienation; apprehensions culminate in withdrawal. Insularity and withdrawal generate misunderstanding which gives rise to mistrust of the other leading to lessened tolerance and excessive aggressiveness. Whether tensions are of communal, ethnic, caste, lingual or parochial origin, they have their genesis. He cautioned against surmises, impression, prejudices and facile inferences; he pleaded for better awareness about the various communities, for awareness brings in sympathy and distance leads to misunderstanding. □

Prof. Chandy Addresses Convocation of Gujarat Ayurved University

Excerpts from the convocation address delivered by Prof. K.M. Chandy, Governor of Gujarat, at the Gujarat Ayurved University, Jamnagar.

"...Ayurveda, as the name itself indicates, is the Veda of Ayur or the science of life and its origin dates back to pre-Aryan times. The earliest references to this system of treatment are found in Atharva Veda. This system developed along with the growth of civilisation in our subcontinent, and characteristic of our cultural heritage, we find scientific knowledge and rationality mixed up with legends and superstition. Ages of study and research must have gone into the development of this science and in all probability the system we have developed in India might be the most ancient of all medical sciences and we may rightly call it the mother of medical sciences. It seems that the period of rational medical science started about 800 BC and from that time onwards until about 1000 A.D. we may call the golden age of Indian medicine. During this period medicine became a regular subject of study at centres of learning like Takshashila and Varanasi. Sushruta Samhita, Charaka Samhita and Vagbhata's Ashtanga Hridaya are repositories of human wisdom on health practices gathered through ages. The translations of Charaka and Sushruta Samhitas reached as far as Manchuria in Asia, and the Arabic translations in the eighth century A.D. influenced European medicine during the middle ages.

"It is not accidental that the heyday of Buddhism happened to be the golden age of Indian medicine as well. The Buddhist scholar missionaries were great physicians and surgeons and along with the gospel of Buddha they carried the message of Indian medicine also to different parts of the world. The great centres of learning established by them were also centres of studies in medicines. Emperor Asoka established dispensaries for human beings as well as animals in each and every village of his vast empire.

"After the first millennium A.D we find a kind of stagnation and decadence overtaking our cultural stream and this has affected our medical system also. We find a lot of superstition and irrational and occult practices enveloping our society in the name of religion and stifling its growth. This unfortunate situation affected not only the development of Ayurveda but inducted into it a lot of irrationality and occultism. Once Ayurveda is freed from this, it can stand out as the healthiest among all systems of medicine.

"Ayurveda is a science which advises how to live properly and deals with the positive aspects of life. It instructs you in ways of life pertaining to protection and promotion of health and cure of diseases. The definition of life by the World Health Organization as a state of physical, mental and social wellbeing has been anticipated long ago by the Ayurveda as the basic principle of the system. In spite of the temporary set back during the middle ages, the Ayurvedic system of medicine has been widely practised in India, Sri Lanka, Nepal and other neighbouring countries and has become almost a part of our life, more particu-

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larly so in the villages.

"During the dark period in our cultural history, this system was preserved by dedicated families in different parts of the country who took upon themselves the onerous task of preserving, practising and amplifying the system and passing it on to the next generation...

"The latter half of the nineteenth century, probably sparked off by our Western contacts also, saw a wind of cultural renaissance blowing all over India reviving our interest in our past history and cultural heritage. It was discovered that there was a glorious past about which the country and the people can be rightly proud of and that we can build our future on the firm foundations of this bedrock. Ayurveda is probably the most glorious and richest among our cultural stands and it is up to us to redeem this great system and marry it to the modern sciences.

"I am very happy to note that of late there has been a narrowing of the gulf between our traditional Ayurvedic system and what we call the modern systems of medicine. It is significant that the Western scientists and universities now realise the potential of Ayurveda and have started studies in the Ayurvedic system. The visit of Dr. J. Laping of University of Heidelberg to this University last year and his visits to other important Ayurvedic institutions in India is evidence of the Western interest in Ayurveda as a successful and comprehensive approach towards health care.

"The World Health Organization has accepted the recommendations of the International Conference of Primary Health Care in its Approach Paper, "Health for All by the Year 2000", and placed the target of attainment by all people by the 2000 A.D. the level of health that will enable them to lead a socially and economically productive life. The members of the World Health Organization have agreed to utilise all their available resources to attain this goal. As a matter of fact, India has the largest number of medical personnel trained in different systems of medicine in the developing world. The country has at present about 2,70,000 Allopathic practitioners, 2,35,000 Ayurvedic physicians, 1,10,000 Homoeopaths and 23,000 Unani and 19,000 Siddha practitioners. We have 106 medical colleges imparting training in the modern systems of medicine, 95 Ayurvedic colleges and 122 Homoeopathic colleges besides a few training institutions in other systems. This will show that there is the necessary infra-structure which if properly utilised can enable us to attain the goal set by W.H.O. to provide health care for all by 2000 A.D.

"It is a matter of pride for all of us that Gujarat has taken the lead in rehabilitating Ayurveda to its rightful place. Vallabhipur was a great seat of learning flourishing in the early centuries and it is significant that the only Ayurvedic university in India is located in Saurashtra which has been one of the cradles of our ancient civilisation. This university with its Research Centre and Postgraduate and Undergraduate institutions, I am sure, will make significant contributions for the growth of Ayurveda utilising all the advances science and technology have made in modern times..." □

PRINCIPAL
MALAVIYA REGIONAL ENGINEERING COLLEGE, JAIPUR
CORRIGENDUM

Applications were invited upto 8-12-83 for the post of Principal at this college. The Malaviya Regional Engineering College Society and the Govt. of India have approved the pay scale and the qualifications for the post as under (This is, however, subject to final approval by the Govt. of Rajasthan):

Pay Scale : Rs. 2250-125/2-2500-EB-125/2-2750,

Decision regarding the facility of rent free accommodation will, however, be taken by the Society in due course.

QUALIFICATIONS

Essential : (1) First Class (or equivalent) Master's/Doctorate Degree in Engineering and Technology.
(2) At least 15 years experience in two or more of the following fields:
- (a) teaching at an institution of University standard;
- (b) research in a recognised institution or organisation;
- (c) industry including Government Departments in a Senior Executive position;
- (d) planning and administration of technical education.

At least five years of experience should be in teaching in an Engineering institution of University standard.

Desirable: (1) Professional/Scientific/Research work of outstanding merit.
(2) Experience in curriculum development, Administration and Planning of Technical Institution at degree and post-graduate level.
(3) Published work of high standard.
(4) Membership of Professional bodies.

The last date for receipt of applications is now **4-5-1984.**

Application forms and other particulars may be obtained by sending Re. 1/- either in cash or in the form of a crossed Indian Postal Order in favour of the Registrar of this College payable at Jaipur along with the self addressed envelope 24 cm. x 10 cm. stamped with 90 Paise.

The applications in sealed covers, superscribed "Application for Principal, Malaviya Regional Engineering College, Jaipur" should be sent to Prof. T.K.N. Unnithan, Chairman, Malaviya Regional Engineering College Society and Vice-Chancellor, University of Rajasthan, Jaipur.

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Workshop on Active Aging at PU

Inaugurating the one day workshop on Active Aging, jointly organized by the Population Research Centre of the Department of Sociology and the Regional Resource Centre, Prof. R. C. Paul, Vice-Chancellor of the Panjab University outlined the traditional pattern of care of the aged in the country's joint family system. He drew the attention of the workshop participants to the urgent need to study the problems of the aged in view of the fact that their number will touch 70 million by the end of the century.

He said that traditionally no preparation or planning for old age was done except discharge one's social obligations, particularly marrying off one's daughter (s). Transition to old age was natural. In a system where the family worked as a unit of production every one contributing one's effort, the aged eased into a slower pace of life giving up decision-making in family matters; though no decision was made without their approval and when made was generally announced in their name. The aged were well integrated in the family, and were respected as village elders, Prof. Paul said.

But with the change in the modes of production, younger people migrating to towns in search of new avenues of employment, and with the spread of education among both men and particulary women, the influence of the elders in the society is eroding, Prof. Paul said. Except for those who enter the political arena, the knowledge and skills of the senior members of the society go unutilized, he said and added that there was no known effort made to prepare the elderly for their decreased participation and devalued roles in the family and community's affairs.

The Vice-Chancellor drew the attention of the workshop participants to the problem of poor health, economic difficulties, inadequate housing and lack of provisions for leisure time activities of the aged. They shared these with the rest of the population of the country. He however added that sometimes feeling of uselessness, loss of status and dependency for their physical and emotional needs were problems peculiar to this group and to solving these, the society has so far paid no attention. The Vice-Chancellor advised the workshop to attempt solutions in addition to the problems of income maintenance, improved health facilities and continuing the pre-retirement social roles of the elderly.

The Vice-Chancellor commended to the workshop a consideration of the role of adult education in this connection. The aged would need to be prepared for their impending retirement but equally important the younger generations must be helped to learn the need to understand and accept a positive, non-competitive role that the aged must be asked to assume in national development so as to maximally utilize their skill base which was a national asset. He was glad that the Pilot Project on the Role of Active Aging in National Development did not limit itself to urban groups only but undertook a study of the needs of the rural aged.

The research project on "The Role of Active Aging in National Development" on which the workshop is based, is a part of the steps being taken by the United Nations Fund for Population Activities (UNFPA) in the implementation of the International Plan of Action on Aging adopted by the U.N. World Assembly on Aging held in Vienna in 1982, as revealed by Prof. V.S. D'Souza at the inaugural session.

In these circumstances, treating elderly as a dependent population not only demoralizes the elderly themselves, but they also become an unbearable burden on the Society. On the other hand both these problems could be solved by recognizing the elderly as a valuable resource which they are. Active Aging is a new concept which is aimed at bringing about such a transformation.

Although the elderly 60 and above constitute less than 6 per cent of India's population, they are still a colossal number of over 40 million which is steeply increasing and is expected to touch about 70 million by 2000 AD. The situation of the elderly in India would be similar to what it is in the more developed countries by 2025 AD.

Symposium on planned economic development at KU

Under the auspices of the Dr. Babasaheb Ambedkar Chair of the Karnatak University, a two-day Symposium on "Planned Economic Development—The Ambedkar Perspective" was inaugurated by Dr. K. C. Hiremath, Professor of Agricultural Economics of the College of Agriculture, Dharwad on 2 March 1984. Outlining the ideas of Dr. Baba Saheb Ambedkar, Dr. Hiremath noted that any real development of the Scheduled Castes or the weak and the downtrodden could only be brought about through the effective wielding of political power. In this context, he examined the various writings of Dr. Ambedkar in terms of Centre—State relations, Electoral reforms, industrial development and Agricultural development vis-a-vis the land reforms as also the accrual of revenue and Income tax.

Dr. K. Raghavendra Rao in his paper discussing Dr. Ambedkar on Planning observed that planning could be interpreted as the process by which a society engages itself in a self-conscious and self-directed change in all spheres of life, as against the usual definition of 'planning' as is taken to mean in what may be called burgeoise economics. Dr. Ambedkar looked upon the social phenomena as inter-linked and inter-dependent in such a way that any intervention in the social processes must be predicted on a holistic or totalistic strategy. Prof. V.K. Natraj and

Dr. Lalitha Nataraj of the Institute of Development Studies, Mysore, outlined the theoretical observations in Planning for the weaker sections of society. The authors noted that throughout his life, Dr. Ambedkar was committed to bringing about the upliftment of the weaker sections of society, and that as one of the architects of the Constitution he tried to incorporate provisions which would enable the State to take effective steps to bring about relief to the downtrodden.

Dr. Mumtaz Ali Khan, Director of the Centre for Research and Development of Dalits, Bangalore, outlined Dr. Ambedkar's blueprint for the development of the weaker sections. He felt that there was a need to institute a cooperative society for a cluster of every 2000 scheduled castes and also that a card with a photo be given to every member of the SC in order that facilities may be availed of without misuse.

Dr (Smt) S. B. Pandit of the Shivaji University, Kolhapur brought out Dr. Ambedkar's analysis of agrarian economy. To Ambedkar, it was the one that dealt directly with agricultural production. Dr. Ambedkar, she said, supported the co-operative movement and the encouragement of agro-based industries for bringing about rural development and removal of rural unemployment.

The second day's session commenced with a paper presented by Dr. Shrinivas Reddy of the Institute for Social And Economic Change, Bangalore. Dr. Reddy brought out the problems of the Scheduled Castes and the role of public policy. He made a very effective macro level profile study of the operational manifestation of social policy during the course of the last three decades. Dr. Reddy examined the policy of protective discrimination and policy of safeguards for public employment as a result of which the Scheduled Castes have been able to have some amount of representation in various fields of social life.

Prof. Usha Rao, also of the Institute of Social and Economic Change, referred to the Economic Independence of the Scheduled Castes. She pointed out that Dr. Ambedkar was not against any particular caste as such but against the system itself. Mrs. Rao Essentially dealt with the condition of the SCs in Karnataka.

In the afternoon session, Prof. Heggade of Mangalore University outlined the role of Banks in bringing about the development of the Harijans and Girijans. In his extensive paper he pointed out the crucial role played by Banks in promoting the development of the weaker sections of society.

Dr. Ambarao Uploankar of Gulbarga presented a paper on Education and occupational aspirations of the Scheduled Caste students. He examined the policies and strategies undertaken to give educational opportunities to the downtrodden.

Dr. Ambarao finally observed that unless ideological and institutional changes are effected in the educational system in accordance with socio-economic and cultural needs of the deprived castes, education is not likely to serve the cause of the weaker sections.

Seminar of promoters of Hindi language at Gujarat Vidyapith

A five-day seminar of Promoters of Hindi Language was held under the joint auspices of Gujarat Vidyapith and All India Federation of Hindi Propagation Institutions. Well-known Hindi scholar Shri Ganga Sharan Sinha, President of the Federation, inaugurating the seminar stated that Hindi is an expression of composite culture of India. It is enriched by most significant contributions of Non-Hindi writers including Tamil writers. Hindi is like Ganga River which is enriched by several rivers merging in it. It is a sad commentary on India's education that despite 37 years of freedom, we have not been able to secure the place of honour that it deserves as the Union official language.

Prof. Ramlal Parikh, Vice-Chancellor of the Gujarat Vidyapith, also addressed and stated that while even small countries like Sri Lanka, Indonesia etc. were conducting their Public Administration and Education at all levels in their National Language, India was lagging behind. The Gujarat Vidyapith has taught Hindi to 35 lakhs of students in Gujarat in the last 40 years through voluntary and selfless efforts of 1100 teachers in 700 villages. This has now become a state-wide movement of out-of-school education. Hindi would soon become an official language of UNO.

Many eminent speakers addressed the seminar on various aspects of development of Hindi, including teacher training, contribution of Urdu in Hindi, Rajasthani folk literature, use of Hindi by Radio and Door Darshan, Use of Hindi in Central Government offices and Public enterprises, etc.

50 Participants for the seminar came from all parts of the country like Kerala, Orissa, Manipur, Tamil Nadu, Kashmir, Karnataka, Andhra, Maharashtra, Gujarat, Rajasthan, U.P., Bihar, etc.

This was the 10th Annual Seminar of the Hindi Federation.

Niger Education Minister visits OU

Mr. Illa Maikassoua, Minister for Higher Education and Research, Niger, met the Vice-Chancellor of Osmania University, Mr. Syed Hashim Ali, and discussed about Higher Education. He showed keen interest to send students to study science, engineering and technology courses in India.

Mr. Maikassoua said there was already a university functioning in his country offering courses in Medicine, Engineering, Science, Languages and Arts. He said a second University called the 'Islamic University' is coming up which will be financed by many Muslim countries for study of subjects of common interest.

He discussed with teachers and Vice-Chancellor about problems of strengthening local languages in his country and study of foreign languages—English and French (Official Language) and was interested in knowing Indian experience. He said many subjects would be translated into Arabic for the convenience of students.

The Education Minister visited the University College of Arts and Social Sciences, University Library, Botany, Zoology and the Genetics Departments. He was very much interested in Research on high-yielding crops, cloning, pollution.

Seminar on Literary Renaissance in India

The 9th seminar on Literary Renaissance in India by the Department of the Bhai Vir Singh Chair of the Panjab University on Comparative Indian Literature and National Integration concluded at Chandigarh recently.

The seminar discussed the need for academic recognition of a new awareness of Indian Literature cutting across regional and linguistic barriers and also the need to evolve new teaching techniques.

In a uanimous resolution, it recommended:

Introduction of comparative literature courses at M. Phil., M.A. and Degree levels; Appointment of task forces of scholars, specialists to work out modalities of syllabi by the UGC.

Prof. S.K. Dass of Delhi argued Comparative Indian Literature as a distinct area of study with a new perspective on the unity behind the diverse literature.

Prof. Amiya Dev of Jadavpur University proposed the four-tier course based on resemblance of languages.

Mr. S.P. Anand of Panjab University stressed the need for translation of the classics and proposed a national body to act as a think-tank and a clearing-house of ideas for the promotion of Comparative Indian Literature.

Composite Indian culture has to be the core of Indian literature according to Prof. Tejwant Singh Gill of Guru Nanak Dev University.

Dr. Motilal Jotwani of Delhi University found in Sufi literature a model of composite Indian Literature.

Dr. Laxminarayan of Panjab University defined composite Indian Culture in terms of inwardness of thinking and feeling.

Dr. N.K. Oberoi of Panjab University contended that literature can no longer shut its eyes to the ethnic, religious and linguistic realities of our life.

In his valedictory address, Dr. Attar Singh, Chairman, School of Punjabi Studies, congratulated the participants of the seminar for stressing the ideological as well as academic need for study of comparative literature.

Home Science and B.Ed. courses modified at Gujarat Vidyapith

Gujarat Vidyapith has decided to intensify its teaching programme of Home Science in pursuance of UGC guidelines for restructuring of undergraduate

CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/ Seminar/Symposium/ Workshop	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks
May 7-26, 1984	ICAR sponsored Summer Institute on Livestock Production under arid conditions.	CAZRI, Jodhpur	Dr. J.P. Mittal, Head, Division of Animal Studies.	—
May 7-26, 1984	ICAR sponsored Summer Institute on Neonatal Diseases of Livestock.	Divn. of Pathology, IVRI, Izatnagar.	Dr. N. S. Parihar, Head.	—
May 7-31, 1984	ICAR sponsored Summer Institute on Animal Feed and Fodder Processing Technology.	College of Vety. Science, APAU, Hyderabad.	Dr. M. Raj Reddy Prof. of Food Technology.	—
May 14-June 2, 1984	ICAR sponsored Summer Institute on Parasitic Infections of Public Health Importance.	College of Vety. Science, Hyderabad.	Dr. B. Venkateswara Rao, Prof. & Head.	—
May 7-31, 1984	ICAR sponsored Summer Institute on Methods of Project Planning Monitoring and Evaluation.	Deptt. of Agril. Economics, CARDS, T.N. Agril. University, Coimbatore.	Dr. P. K. Aiyasamy, Prof. & Head.	—
May 14-June 7, 1984	ICAR sponsored Summer Institute on Viral Diseases of Small Ruminants.	Divn. of Virology, IVRI, Mukteswar.	Dr. M.P. Yadav, Head.	—
May 17-June 7, 1984	ICAR sponsored Summer Institute on Application of Indigenous Electronic Instruments for fishing and fisheries research.	C. I. F. T. Willingdon Island, Mutsyapuri PO, Cochin.	Dr. T. K. Sivadas, Scientist, Electronics & Instrumentation Division.	—

courses to make them more relevant and functional to the needs of rural society. Vice-Chancellor Prof. Ramlal Parikh invited Prof. Malhan, Director of Institute of Home Economics of Delhi University to visit the rural campus of the Gujarat Vidyapith for this purpose. Accordingly Prof. (Mrs.) Malhan accompanied by the Vice-Chancellor and the Registrar Shri Vinodbhai Tripathi visited Randheja campus (Distt. Gandhinagar) and addressed the students of Women's College of the Gujarat Vidyapith at village Randheja, 45 kms from Ahmedabad and expressed her appreciation for the work done in training young women for rural services. On the advice of Prof. Malhan, the Gujarat Vidyapith has decided to provide specialised courses in Food and Nutrition, Child Development, Textile and Clothing, Resource Management in Home Science Extension. It has also introduced Home Science Education as a method of teaching in its B.Ed. course. The Gujarat Vidyapith will be the first Teachers' Training College to do so in Gujarat State.

Seminar on Centre-State relations at Punjabi University

Multi-dimensional responsibilities of the Centre have created an impression in the States where provincial parties have been in power that they were not being looked after properly, remarked Dr. S.S. Johl, Vice-Chancellor, Punjabi University. He was presiding over a seminar on "Centre-State relations" organized jointly by the Department of Public Administration and Department of Planning & Development of Punjabi on March 24.

The Vice-Chancellor exhorted the seminarians to participate in the deliberations on the subject fearlessly so that their cogent reasoning may be of use to the Sarkaria Commission.

Dr. Johl pointed out to scholars that of ideological commitments should not stand in their way of expression as decisions on the subject would be taken in the national interest only.

Dr. Johl pleaded an "answerable democracy" and preferred a strong centre instead of an "interfering and monopolizing one" with strong states to support it.

He said that the scholars and educators may give a direction to the "policy makers". He also urged to give "standardized Punjabi" useful space in the art, science and culture".

Inaugurating the seminar Prof. H.S. Deol, Member, Punjab Public Service Commission, pleaded for retention of Foreign Affairs, Defence, Trade etc. by the Centre but more role for the State on the subject of education.

Terming the Centre-State relations as an organic mechanism, Mr. Deol said each limb of the body should be completely immunized.

Mr. Amarjit Singh, Dhillon, Director, Planning and Development said that papers read on the subject would be given the shape of a book so that students opting Punjabi as a medium in future may not feel themselves wanting in vocabulary.

The Director announced that the Department has a plan to cover Education, Political Science and Library Science under the programme switch over of medium during the year.

The seminar which was first in Punjabi language in the northern part of this country involved a large number of scholars to write their papers on various aspects of Centre-State relations in Punjabi language.

All India Muslim Education Society meets at Delhi

The seventh Conference of the All-India Muslim Education Society which recently concluded at Delhi has taken a decision to set up an Arabic University with one Arabic College in each district to be set up during the next five years, it is reported. The society also plans to set up Cultural Centres with community and prayer halls, libraries, hostels and guest rooms in each district. The plan is to set up one Arts and Science College in each district which has a 15 per cent Muslim population. Besides, one Medical College in North and another in South India are also proposed to be established.

It will also institute a Rs. 50-lakh returnable scholarship scheme for Muslims.

Vocational courses at Goa, Daman and Diu

The Administration of Goa, Daman and Diu has decided to introduce vocational courses at + 2 stage from 1984-85. To begin with the following courses have been selected :

Scooter and Motor Cycle servicing, General Contracting, Banking, Insurance, Office Management, Small Industries and Self-Employment, Cookery, Bakery and Confectionery and Food Preservation.

Time bound promotion in Karnataka

According to reports, the State Government of Karnataka has agreed to implement time bound promotion scheme for teachers and other employees of the Education Department in Karnataka by relaxing certain rules. This scheme is likely to benefit about 50,000 employees.

CSIR ocean study centre

A team of experts has visited Andaman and Nicobar islands in connection with a proposal to set up a regional Centre for Oceanographic studies there. The proposal, according to the Union Minister of State for Science and Technology and Ocean Development, is under the active consideralion of the Council of Scientific and Industrial Research.

Lecture on cultural heritage of Amritsar at Patiala

Amritsar is a city of unique culture and traditional heritage in Punjab where people have strong mental disposition to face modern challenges' observed Professor V.N. Datta and eminent historian at Kurukshetra University. He was delivering a Lecture on "Cultural Heritage of Amritsar" at the Senate Hall of the Punjabi University on March 21.

Professor Datta said, the unique feature in the construction of Harimander Sahib at Amritsar was that unlike Mandirs, it had four doors through which the people were allowed to enter irrespective of any caste, class, creed and religion.

Describing the compilation of Guru Granth Sahib as a great event in the national history, Dr. Datta said it had no peer in the world history.

The inclusion of teachings of Saints from different religions in Guru Granth Sahib, Professor Datta said, well speak of the outlook provided by the Sikh Gurus.

Professor Datta deplored the erosion of human values among a strata of society which was causing concern for the last few years.

Presiding over the lecture, Dr. S.S. Johl, Vice-Chancellor remarked that the people of Amritsar cherish strong and positive values which have enabled them to face modern challenges. The Vice-Chancellor said the people of Amritsar should radiate such a spirit to others which may enliven the atmosphere in other parts of the country and abroad.

XVIIIth Annual Conference of Indian Association for American Studies at GKV

The XVIIIth Annual Conference of the Indian Association for American Studies was held at Gurukula Kangri Vishwavidyalaya, Hardwar from April 1 to 3, 1984. It was attended by more than 100 delegates from all over India, including some Americans. In his inaugural address Dr. Satyavrata Siddhantalankar, Visitor, GKV, emphasised East-West unity and the Gurukul system of education based on moral and humanistic values, good conduct and character, close contacts between the teacher and the taught, and good environment. He said that heredity and environment pay a very prominent role in the shaping of a human being. The Gurukul system of education being free from various kinds of pollutions of the modern age can be the ideal system of education for India and other countries.

In his welcome address, Vice-Chancellor, Shri GBK Hooja, spoke about the close cultural, academic and social ties between India and America. He mentioned that these ties were age old and that Indian freedom fighters derived inspiration and guidance from the American War of Independence, and that American scholars and advancements in Science and Technology have influenced Indians a great deal. For example, Thoreau's influence on Gandhiji is well-known and was acknowledged by Gandhiji himself.

Shri Hooja expressed the hope that this conference will be helpful in disseminating India's rich spiritual values and knowledge hidden in the Vedas and shall contribute not only towards international peace, goodwill, understanding and East-West contacts but also help in making this world a happier place to live in by decreasing tension, anger, fear, greed and other such vices.

Quoting from Emerson's famous essay, *The American Scholar*, the Vice-Chancellor asked the scholars to be free, fair and fearless and bring to the notice of the western world through English India's hoary past and its rich and cultural and spiritual heritage. He also advised them to stand for a life, full of spiritual and moral values.

The delegates presented papers on various aspects of Indo-American life and letters. A souvenir and a Research Journal on American Studies were also brought out on this occasion.

M.Phil courses at Sambalpur

The Sambalpur University has decided to introduce M.Phil courses in Public Administration, Economics, Anthropology and Sociology.

A new postgraduate department in Geology will also be opened. These decisions were taken, it is reported, at a meeting of the Senate of the University held recently.

Grant to GU for Chicory research

A grant of Rs. 3 lakhs has been provided to a Professor and Reader in the Deptt. of Agricultural Botany of Gauhati University by the Science, Technology and Environment Deptt. of the Govt. of Assam for a research project on "Prospects of Chicory Cultivation in Assam.

Planning Commission sets up a steering group for science

A Steering Group for Science & Technology with Prof M.G.K. Menon as Chairman has been set up by the Planning Commision which will recommend a policy framework for this sector and also lay down priorities for the Seventh Plan.

The Group will assess the achievements as at the end of Sixth Plan period especially from the viewpoint of need for specific mechanism for strengthening linkages between educational institutions and research laboratories' national Planning group in the Central and State Governments, etc. and make recommendations for the future. It will also assess the existing facilities, amenities and incentives available to the scientific community for effective functioning and suggest measures for their improvement in the future.

The members of the Steering Group are : Prof. Rais Ahmed, Vice Chairman of UGC, Dr V.S. Arunachalam, Scientific Advisor to the Defence Minister, Prof Satish Dhawan, Secretary, Dept. of Space, Dr O.P. Gautam, Director-General, ICAR, Shri P.P. Gupta, Secretary, Dept. of Electronics, Shri D.V. Kapur, Secretary, Dept. of Heavy Industry, Shri T.N. Khoshoo, Secretary Dept. of Environment, Dr Ramalingaswamy, Director General, ICMR, Dr Raja Ramanna, Secretary, Dept. of Atomic Energy, Dr. G.S. Sidhu, Director General, CSIR, Dr. S. Varadarajan, Secretary. DST, Prof Yash Pal, Chief Consultant, Planning Commision, Dr P.M. Bhargawa, Director, Centre for Cellular and Molecular Biology, Prof P.V. Indiresan, Director, IIT, Madras, Prof. A.B. Joshi, Pure, Shri Devendra Kumar, Centre of Science for Villages, Wardha, Prof. S. Ramaseshan, Director, IISc, Bangalore, Dr. (Mrs) Kamal Ranadive of Bombay, Prof. A.K. Sharma, President, INSA, Prof M.M. Sharma, Dept. of Chemical Technology, Bombay University and some other advisors from the Planning Commission.

AIU News

Evaluation and Information Unit

The Evaluation and Information Unit of the AIU offers credential evaluation services and shares the extensive material and information on foreign education system with the Universities, faculty, students in India and abroad, government agencies and others. The Unit is assigned with the function of determination of equivalence and recognition of degrees/diplomas for purpose of admission to higher courses. This applies both to Indian qualifications and qualifications obtained from foreign countries. The AIU has been accepted by the universities and the government agencies as an accredited agency on assessment of academic credentials. The decision making power on recognition of qualifications at the highest level is vested in the Equivalence/Standing Committees of Vice-Chancellors. The AIU is also represented on the Board of Assessment for Educational Qualifications of the UPSC which decides recognition for employment purposes. The Evaluation and Information Unit is represented on the Inter-Ministerial Scholarship Committee which awards the scholarships to foreign students under Cultural Exchange Programme and various schemes of the Government of India. The Unit works with close liaison with the Indian Missions abroad and foreign Missions located in New Delhi. It provides useful information to the foreign students as well as students from various parts of the country on system of education, courses & facilities available at the universities and higher educational institutions, eligibility requirements and such other details. The Unit produces a series of Handbooks — Universities Handbook, Handbooks of Medical Education, Engineering Education, Management Education and Agricultural Education.

The Equivalence Committee, at its recent meeting held at Rani Durgavati Vishwavidyalaya, Jabalpur had decided that a ‘Book on Equivalence’ showing information on foreign examinations recognised by the universities be compiled by the Unit. The book is expected to be printed by the end of the year. The Committee also approved that a small booklet for use of the foreign students may also to be produced.

Enquiries may be addressed to: The Under Secretary (Evaluation & Information), Association of Indian Universities, AIU House, 16 Kotla Road, New Delhi-110002.

Sports News

Sam—mascot for next Olympics

Competition, the very assence of the Olympic Games, was the kenote in the selection of Sam the Olympic Eagle, to reign as mascot for the Los Angeles Olympiad.

Sam, product of Walt Disney Productions artistry, was the result of not only a three month-long creative contest among three organizations, but stern internal competition among some 25 Disney artists and animators.

It was the Olympic design of C. Robert Moore, creative director for Disney, which immediately caught the fancy of the Licensing and Merchandising Commission of the Los Angeles Olympic Organizing Committee and LAOOC president Peter V. Ueberroth. Thus Sam because the sprightly mascot of the 1984 Olympic Games.

According to Moore "our initial approach to the project was to adept something specially suitted to the Los Angeles area. But nothing quite satisfied us, and we broadened the concept to include the State of California."

"Again, we failed to come up with a character that contained all the elements we desired to represent the 1984 Games. I personally worked with at least 20 different characters before the thought came to me, ‘why not the American eagle," the national emblem of the United States."

"We wanted a bright, happy-go-lucky character, with qualities of warmth and a certain amount of cuteness," explained Moore.

Sam views the world with a glint in his eye from beneath a jaunty, red, white and blue, Olympic-decorated top hat that gives him an overall height of 7 feet, 6 inches. Sam also sports a snappy, red and white satin bow tie.

The mascot's head and hat are fashioned of fibreglass, while his body exterior is made of fur and his taloned feet are constructed of a rubberized material. Sam's other vital statistics: width 36 inches, and weight 50 Ib.

INDIAN INSTITUTE OF TECHNOLOGY, KANPUR 208016

Notice for Admission to M.Tech., Ph.D. & M.Sc. in July 1984

Admission of students will be made for the session 1984-85 commencing on 23-7-84 in the following Post-Graduate Programmes at IIT Kanpur: More detailed information is given in the information Brochure which will be sent alongwith the application form.

MASTER OF TECHNOLOGY (M.Tech.)

The admissions to the M.Tech. programme in Indian Institutes of Technology are being Coordinated this year through a Joint Advertisement which is appearing separately. The procedure for obtaining the application form and sending it back after completion is given in the joint advertisement.

Any candidate interested in one or more Departments/Programmes at IIT Kanpur in the above application form is required to separately furnish the following particulars on Plain paper to the Assistant Registrar (Academic)) I.I.T. Kanpur-208016.

1—Name 2—Mailing Address 3—Year, Registration Number and Score of GATE 4—IIT to which the candidate has sent his application 5—Departments/Programmes at IIT Kanpur the candidate is interested in 6—University, Programme, Year, Marks and Rank for the last two years.

In addition to the Joint Advertisement the following salient points and details be also noted.

A selected number of candidates for each of the Programmes will be called for Counselling/Interview by the concerned Department/Programmes at I.I.T. Kanpur. These candidates will be paid to and fro second class railway fare. Admission will be based on the GATE Score/Marks obtained in Qualifying Examination (B.E., B.Tech etc.) and/or interview. Candidates admitted to M.Tech. Programme if found suitable can be allowed to change over to Ph.D. Programme after one semester.

Admission to M.Tech. Programme is also available to sponsored candidates. Full time or Part-time. However, candidates sponsored for full time and qualified through GATE (Graduate Aptitude Test in Engineering) are eligible for Institute Scholarships also. Details are available on request from Assistant Registrar (Academic) I.I.T. Kanpur-208016.

DOCTOR OF PHILOSOPHY (Ph.D.)

Programmes are available in Engineering in the Departments of

1—Aeronautical Engineering 2—Chemical Engineering 3—Civil Engineering 4—Computer Science 5—Electrical Engineering (including Electronics) 6—Mechanical Engineering 7—Metallurgical Engineering and in the Inter-disciplinary Programmes of

1—Industrial & Management Engineering 2—Materials Science 3—Nuclear Engineering & Technology.

SCIENCE

In the Departments of

1—Chemistry 2—Mathematics (separate Programmes in Mathematics & Statistics) and 3—Physics

HUMANITIES & SOCIAL SCIENCES

In the HSS Department in the areas of

1—English 2—Philosophy and 3—Sociology

MINIMUM QUALIFICATIONS

A high second class Master's degree or equivalent in the respective or allied areas.

SCHOLARSHIP

Rs. 700/- per month to all the selected candidates in Engineering and Rs. 600/- per month to all the selected candidates in Science and Humanities and Social Sciences with an enhancement of Rs. 100/- per month after two years of satisfactory performance in the programme (likely to be revised).

MASTER OF SCIENCE (M.Sc.)

Programmes are available in the Departments of

1—Chemistry 2—Mathematics (separate programmes in Mathematics and Statistics) 3—Physics.

DURATION

Two years (i.e. four semesters).

MINIMUM QUALIFICATION

B.Sc. in appropriate areas.

SCHOLARSHIP

Rs. 170/- per month (plus freeship) for 25% of the candidates. Freeship for an additional 10% candidates.

GENERAL INFORMATION

1. More information about the areas of study and the eligibility of candidates with different backgrounds will be supplied with the application form.

2.(a) A selected number of candidates for each of the programmes will be called for interview at IIT Kanpur. The candidates for Ph.D. and M.Sc. programmes may have to take a test also.

(b) The candidates called for Ph.D. and M.Tech. programmes will be paid to and fro second class railway fare; however, candidates for M.Sc. programme will not be paid railway fare.

3. Fifteen per cent of the seats are reserved for Scheduled Caste and 7½% for Scheduled Tribe candidates and they can apply irrespective of their class/division in their qualifying examination.

4. M.Tech. and Ph.D. students may be required to assist in the teaching/departmental work to the extent of six hours per week.

5. Admission of external candidates, sponsored candidates and part-time candidates are also available in Ph.D. programme. However, they are not eligible for institute scholarship. Details are available on request.

HOW TO APPLY FOR ADMISSION TO Ph.D. AND M.Sc. PROGRAMME

1. Candidates who possess the qualification outlined above (including those who are appearing/have appeared/will be completing their qualifying examinations not later than JULY 1984) may send a requisition for application on plain paper.

2. Application forms together with detailed instructions including eligibility conditions etc. for admission to each programme of study can be had either personally from the Office of Academic Section or through post by sending request alongwith a self addressed stamped envelope (Rs. 2.50) of the size 28 cm × 13 cm to the Assistant Registrar (Academic) Indian Institute of Technology Kanpur-208016, the intended programme duly superscribed on the envelope.

3. Those who wish to apply for admission to more than one programme/department should send separate envelopes with necessary postage stamps.

The candidates should fill up the application forms carefully following the directions given in the application form/information brochure.

NOTE: Incomplete applications without the required information/enclosures will not be considered.

LAST DATE FOR THE RECEIPT OF COMPLETED APPLICATION FORM: MAY 7, 1984.

MMG—662A

INDIAN INSTITUTES OF TECHNOLOGY

BOMBAY, DELHI, KANPUR,
KHARAGPUR AND MADRAS

Joint admission to 3-semester M.Tech. programmes July 1984.

General:

Applications are invited for admission to the 3-semester MASTER OF TECHNOLOGY (M.Tech.) programmes offered by the five Institutes as well as M. Arch. and two year MCP, MRP Programmes at IIT, Kharagpur only.

Disciplines:

Disciplines and areas of specialisations for the Master's Programmes of the IITs are given in the Information Booklet that would be sent along with the application form.

Each of these programmes is sufficiently flexible and provides considerable choice of electives not only to give specialisation in selected fields but also to meet the diverse interests of engineers and scientists from different disciplines.

Minimum Qualifications for Admission:

The candidates for admission to the Courses mentioned above must have qualified at the Graduate Aptitude Test in Engineering (GATE) held on 26th February, 1983 or 3rd December, 1983 and must possess a Bachelor's degree in Engineering or equivalent or Master's degree in Science as stated in the Annexure to the GATE brochure/Information Booklet.

Candidates who have been successful in the GATE but whose results in the qualifying degree examination have yet to be declared are also eligible to apply provided they complete all formalities towards the degree latest by August 1st, 1984. They will be required to produce such a course completion certificate at the time of joining and their admission will be provisional subject to their passing in the qualifying examination. Based on the GATE score obtained, candidates will be called for counselling to one of the Institutes of their choice. Following the counselling they would be required to complete the choice sheet indicating their order of preference for the courses offered by the Institutes. Admission will be based on the GATE score; weightage for the marks obtained in the qualifying examination (B.E., B.Tech. etc.) may be given up to a maximum of 30 per cent. Admission for each candidate will be considered strictly on the basis of merit and in the order of preference listed by him/her. Admissions are subject to the candidates being found medically fit.

Reservation for Scheduled Castes/Scheduled Tribes:

Certain percentage of seats are reserved for candidates belonging to the scheduled castes and scheduled tribes as per rules. However, to be considered for admission they should have qualified at the GATE 1983, February or December.

Admission of Sponsored Candidates:

Candidates fully sponsored and financed by their employers will be considered for admission without qualifying at the GATE provided they have secured in the qualifying examination an average percentage of marks not less than that specified by the Institute to which they apply. Their admission will be done separately by each Institute and they are requested to contact the Institutes of their choice for application forms and mail the completed applications to the same Institutes.

Scholarship:

All candidates, including the sponsored candidates, who have been admitted to an M.Tech. programme through the GATE merit list will be awarded a scholarship of Rs. 600/- per mensem for the entire duration of the programme.

However, the sponsored candidates should produce from their employers a 'No Objection Certificate' to receive the scholarship.

Information Booklet and Application Form:

These can be obtained by sending

i) the application/registration fee of Rs. 20/- by a CROSSED Indian Postal order/Bank draft in favour of IIT, ____________ *, payable at IIT, ________ *
(*Insert place of IIT to which you are making the request)

ii) a requisition letter on A4 size paper (297 × 210 mm) giving the Postal Order/Bank drafts details and

iii) a self-addressed stamped (Rs. 2.00) envelope of C5 size (229 × 162 mm) and superscribed "ADMISSION TO M.TECH." to any one of the following

CONVENER, M.TECH. ADMISSIONS,
INDIAN INSTITUTE OF TECHNOLOGY,
BOMBAY-400 076, or DELHI-110 016 or
KANPUR-208 016, or KHARAGPUR-721 302
or MADRAS-600 036.

Last Dates:

Supply of application forms by post:
7th May, 1984 (Monday)

Receipt of completed applications:
21st May, 1984 (Monday)

Advt. No. F. Acd/ACU/M1/84.

INDIAN INSTITUTE OF TECHNOLOGY

MADRAS 600 036.

ADMISSION TO M.Sc. COURSES AND M.S./Ph.D. RESEARCH PROGRAMMES 1984-85

Applications are invited for admission to the following courses and programmes in the Institute, for the academic session 1984-85 commencing July 16, 1984.

M.Sc. DEGREE	**in CHEMISTRY/ MATHEMATICS/ PHYSICS** by course work of 2 years duration consisting of four semesters.
RESEARCH PROGRAMMES	**Ph.D.** Minimum 24 months for a full-time candidate with Master's degree and 36 months for a candidate with Bachelor's degree. **M.S.** 18 months for a full-time candidate.

AERONAUTICAL ENGINEERING

Aerodynamics; Aerospace Propulsion, Aircraft Structures; Aircraft Design.

APPLIED MECHANICS

Structural Mechanics and Experimental Stress Analysis; Fluid Mechanics and Wind Energy Systems; Biomechanics and Biomedical Engineering; Machine Dynamics and Vibration and Noise Engineering; Lubrication Mechanics and Industrial Tribology, Condition Monitoring and Maintenance Engineering and Management.

CHEMICAL ENGINEERING

Catalysts and Reactors; High Polymer Engineering (including Composite Materials and Structures); Particle Technology including Mineral Processing; Instrumentation and Process Control; Computer aided Process Synthesis and Equipment Design; Environmental Engineering; Biochemical Engineering.

CHEMISTRY (Ph.D. only)

Analytical Chemistry, Inorganic Chemistry, Organic Chemistry, Physical Chemistry, Theoretic Chemistry—(Molecular Spectroscopy and Quantu Chemistry), Biochemistry.

CIVIL ENGINEERING

Building Technology, Hydraulic Engineering, Soil Engineering, Structural Engineering, Transportation Engineering.

COMPUTER SCIENCE & ENGINEERING

Analysis of Algorithms, CAD for VLSI, Data Base Systems, Distributed Processing, Theoretical Computer Science.

ELECTRICAL ENGINEERING

Analog and Digital Filters, Communication Systems; Digital Techniques; Electro-magnetic Theory and Wave Propagation, Surface Acoustic Wave Devices, Electro-magnetic Compatibility; Digital Signal Processing; Laser Communication; Microwave Engineering, Television Engineering, Image Signal Processing and Fibre Optic Communication, Semiconductor Devices and LSI Technology; Control and Guidance; Measurement and Instrumentation; Networks and Systems; Power Electronics; Electrical Machines and Drives; High Voltage Engineering; Power Systems—Operation and Control; Computer aided Analysis.

HUMANITIES AND SOCIAL SCIENCES (M.S./Ph.D.)

Industrial Engineering and Industrial Management, Behavioural Sciences.
Ph.D. only: English, History, Psychology and Economics.

MATHEMATICS (Ph.D. only)

Analysis; Real Analysis, Complex Analysis; Numerical Analysis; Differential Equations; Applied Probability and Stochastic Processes; Theoretical Physics; Mathematical Physics; Fluid Mechanics; Magneto-Hydrodynamics; Elasticity; Piezoelectricity; General Relativity and Cosmology.

MECHANICAL ENGINEERING

Thermal Sciences; Combustion and Propulsion; Internal Combustion Engines and Gas Turbines; Heat Transfer and Thermal Power; Thermal turbomachines;Refrigeration and Airconditioning; Hydroturbomachines; Production Engineering; Machine Tools; Metrology; Machine Design; Machine Elements, Mechanisms, Friction and Wear; Fatigue Design, Mechanical Handling, Instrumentation and Control, Precision Engineering, Solar Energy, Cryogenic Engineering.

METALLURGICAL ENGINEERING

Metal Joining, Metal Casting, Metal Forming, Materials Technology, Physical Metallurgy, Iron and Steel Technology, Structural Metallurgy, Mechanical Metallurgy, Powder Metallurgy, Thermodynamics of Metallurgical Systems.

OCEAN ENGINEERING CENTRE

Marine Geotechnical Engineering, Materials for Marine Environment; Ocean Hydrodynamics and Dynamics of Floating Bodies; Ocean Structures, Ocean Energy.

PHYSICS (Ph.D. only)

Theoretical Solid State Physics; Experimental Solid State Physics; X-ray; Semiconductors and Magnetic Materials; Modern optics, Holography, Speckle Phenomenon and Optical Data Processing.

CENTRE FOR SYSTEMS AND DEVICES

Acoustical Imaging, Electro-magnetics and Antennas, Radar Signal Processing, Semiconductor Devices.

MINIMUM QUALIFICATION FOR ADMISSION

M.Sc.

A first class (or 60% marks) or equivalent in the Bachelor's degree in Science (Chemistry, Mathematics, Physics). Candidates who have passed B.Sc. in Statistics with a first class or 60% marks or equivalent are eligible to apply for M.Sc. (Mathematics). Those appearing for their qualifying examinations are also eligible to apply provided they are completing all their qualifying examinations not later than 16th July 1984. Candidates will have to come to IIT Madras **at their own cost** for a departmental written test followed by an interview.

M.S.

From the 1983-84 academic session, all applicants for full-time M.S. programme, holding a qualifying degree in Engineering/Technology, must have successfully completed the Graduate Aptitude Test in Engineering (GATE). Bachelor's degree holders in Engineering/Technology or equivalent or Master's degree in Science (Mathematics, Physics, Statistics, Applied Science, Material Science and Chemistry for certain areas) with a First Class or with a minimum of 60% marks in the aggregate in the qualifying degree examination in the prescribed discipline. For Industrial Management, Master's degree holders in Economics/Sociology/Psychology/Geography/Social and Behavioural Sciences/Commerce with a First Class or with a minimum of 60% marks in the aggregate or equivalent with adequate background in Mathematics will also be considered. For Industrial Engineering a First Class Bachelor's degree or equivalent in any branch of Engineering/Technology For certain areas in Civil Engineering, Bachelor's degree holders in Aeronautical Engineering/Agricultural Engineering or Master's degree holders in Applied Mathematics/Applied Sociology/Geo-Physics with a First Class or 60% marks in the aggregate will also be considered. In addition, science graduates should possess two years' experience in Civil Engineering area.

Ph.D.

Candidates should possess a First Class or a minimum of 60% of marks in the aggregate or equivalent in the qualifying degree examination in the prescribed discipline as indicated below: Master's degree in Engineering/Technology or equivalent for the Engineering Departments, and Master's degree in Science for the Science Departments and Master's degree in Humanities, Social and Behavioural Sciences, Industrial Engineering, Industrial/Business Management for the Humanities and Social Sciences Department. For the Departments of Aeronautical Engineering and Metallurgy, candidates with a Master's Degree in Science are also eligible to apply. For certain areas in Civil Engineering Master's degree holders in Engineering Mechanics/Aeronautical Engineering, Architecture/Town and Country Planning/M.B.A. after obtaining basic degree in Civil Engineering with a First Class or 60% marks in the aggregate will also be considered. Candidates who have qualified for the award of the Bachelor's degree with exceptionally good academic background in the prescribed discipline and who have successfully completed the Graduate Aptitude Test in Engineering are also eligible to apply subject to the following conditions:

1. If the candidate happens to be a B. Tech. degree holder of an IIT or B.E. degree holder of the I.I.Sc., Bangalore, he should be in the top 25% of the class.
2. In the case of Bachelor's degree holder from a University, he should be among the top 10 rank holders in the University.

CONCESSION TO CANDIDATES BELONGING TO SCHEDULED CASTE/TRIBE

(a) 15% for SC and 7½% for ST are reserved with provision for interchange of the percentages.

(b) Relaxation up to 5% in the qualifying examination marks.

SCHOLARSHIP

M.Sc.

On the basis of performance at the end of the I semester 25% of the students admitted will be awarded merit scholarship of Rs. 170/- p.m. and exempted from payment of tuition fees. In addition, another 10% of M.Sc. students are exempted from payment of tuition fees.

All SC/ST students of M.Sc. who satisfy the means criteria as per the Government of India Postmetric scholarship rules will be eligible for scholarship of Rs. 185/- p.m. (inclusive of State Government Scholarship, if any) in addition to being exempted from payment of tuition fees, as per rules.

M.S.

All students admitted will be awarded a scholarship of Rs. 600/- p.m.

Ph.D.

Holders of Masters' Degree in Engg.	Rs. 700/- p.m.
Holders of Bachelor's degree in Engg., Master's degree in Science and Humanities	Rs. 600/- p.m.

Candidates called for interview for the Ph.D. programme will be paid second class to and fro train fare from their place of residence to the Institute by the shortest route.

EXTERNAL REGISTRATION (M.S./Ph.D.)

Facilities are available for persons working in scientific laboratories/Industries with R&D facilities/R&D establishments to work for M.S. in Engineering and Ph.D. in Science and Engineering Departments. The candidate must possess the minimum academic qualifications prescribed for the full-time candidates and also a minimum of two years of continuous service in these organisations in research/design/development areas. Candidates not possessing first class or 60% marks but possessing outstanding R&D experience may also be considered for admission subject to their satisfying the prescribed conditions. Such candidates have also to appear for a departmental qualifying examination. The candidates must be sponsored by their organisation with an undertaking that the organisation will provide all facilities to the employees to pursue research. The candidates, if selected, should take leave and relief from the employer for the prescribed residence period. No scholarship will be paid for external registration candidates. NO T.A. WILL BE PAID FOR THESE CANDIDATES ATTENDING INTERVIEWS. Faculty members from Universities/ Colleges are not eligible to apply under this scheme.

GENERAL

Application form and information brochure for the courses/programmes can be obtained by candidates on requisition, mentioning clearly the courses for which they are applying and by sending (i) a Bank Draft for Rs. 5/- in favour of IIT, Madras, payable at Madras and (ii) a self-addressed unstamped envelope (27cm × 12cm) to

The Deputy Registrar (Academic)
Indian Institute of Technology
Madras-600 036.

Those who apply for **External Registration** should indicate the same clearly in the requisition. A candidate proposing to apply for more than one Department/programme should request for additional application forms for which a fee of Re. 1/- for each additional form should be included in the Bank Draft.

LAST DATE FOR RECEIPT OF REQUISITIONS FOR APPLICATION FORMS BY POST	23rd April, 1984 (Monday)
LAST DATE FOR RECEIPT OF COMPLETED APPLICATIONS	11th May, 1984 (Friday)

PROBABLE DATES FOR INTERVIEW/TEST:

M.Sc.	14th June, 1984 (Thursday) 15th June, 1984 (Friday)
M.S./Ph.D.	25th June, 1984 (Monday) 26th June, 1984 (Tuesday) 27th June, 1984 (Wednesday)

Advt. No. F. Acd./ARU/1/84-85

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Baij Nath. *Mathematical analysis and its applications*. BHU, Varanasi. Prof. S.N. Lal.

2. Das Gupta, Madhu Chanda. *Hydromechanics*. BHU, Varanasi. Dr. K. Lal.

3. Dave, Govind Narayan. *Special functions of complex variable*. BHU, Varanasi. Dr. B.D. Agrawal.

4. Mallik, Dinesh Kumar. *Applications of mathematical analysis*. BHU, Varanasi. Prof. S.N. Lal.

5. Pandey, Prakash. *Theory of modules*. BHU, Varanasi. Prof. A.K. Tiwari.

6. Rama Shankar. *Hilbert space*. BHU, Varanasi. Dr. Ashok Saxena.

7. Ritolia, Subhash Kumar. *Special functions*. BHU, Varanasi. Dr. S.N. Singh.

8. Singh, Alendra. *Mathematical analysis and its applications*. BHU, Varanasi. Prof. S.N. Lal.

9. Singh, Ashok Kumar. *Mathematical analysis and its applications*. BHU, Varanasi. Prof. S.N. Lal.

10. Singh, Babban Prasad. *Fluid mechanics*. BHU, Varanasi. Prof. K. Wal.

11. Singh, Man Bahadur. *Non-linear waves*. BHU, Varanasi. Dr. V.D. Sharma.

12. Sinha, Abhilasha. *Fluid mechanics*. BHU, Varanasi. Dr. Newal Kishore.

13. Sohan Singh. *Fluid mechanics*. BHU, Varanasi. Dr. Ram Babu.

14. Surendra Vikram. *Differential geometry*. BHU, Varanasi. Dr. S.D. Singh.

15. Tripathi, Anil Mani. *Theory of modules*. BHU, Varanasi. Prof. A.K. Tiwari.

16. Tripathi, Durga Datta. *M.H.D. flows*. BHU, Varanasi. Dr. Ram Babu.

17. Tripathi, Narendra Mani. *Fluid mechanics*. BHU, Varanasi. Dr. Ram Babu.

18. Verma, Savitri. *Differential geometry*. BHU, Varanasi. Dr. S.D. Singh.

19. Virendra Singh. *Mathematical analysis and its applications*. BHU, Varanasi. Prof. S.N. Lal.

20. Yadava, Badri Singh. *Mathematical analysis and its applications*. BHU, Varanasi. Prof. S.N. Lal.

21. Yadava, Keshar Prasad. *Operations research*. BHU, Varanasi. Dr. Newal Kishore.

22. Yadava, Lalta Prasad. *Metric space*. BHU, Varanasi. Dr. Ashok Saxena.

23. Yadava, Ram Avadh. *Differential geometry*. BHU, Varanasi. Dr. S.D. Singh.

24. Yadava, Ram Kirti. *Differential geometry of Finsler manifolds*. BHU, Varanasi. Prof. B.B. Sinha.

25. Yadava, Ram Narain. *Differential geometry of Finsler manifolds*. BHU, Varanasi. Prof. B.B. Sinha.

26. Yadav, Ram Raj. *Fluid dynamics: Boundary layer*. Prof. K. Lal.

Physics

1. Anil Kumar. *Theoretical studies in molecular structure*. BHU, Varanasi. Prof. P.C. Mishra.

2. Bhattacharya, Neela. *Electron (positron) scattering by simple molecules*. BHU, Varanasi. Dr. D.N. Tripathi.

3. Mallick, S.P. *Growth, synthesis and photoconducting behaviour of layered semi-conductor*. BHU, Varanasi. Prof. O.N. Srivastava.

4. Mishra. Arpita. *Description of high spin states in deformed nuclei*. BHU, Varanasi. Dr. A.N. Mantri.

5. Mukherjee, Surjit. *Studies on multistep reaction mechanism*. BHU, Varanasi. Prof. J. Rama Rao.

6. Nayak, Basanta Kumar. *Experimental high energy physics*. BHU, Varanasi. Prof. S.K. Tuli.

7. Rama Krishna, Kanneganti. *Growth, synthesis and hydrogenisation characteristics of rare earth metal based alloys*. BHU, Varanasi. Prof. O.N. Srivastava.

8. Singh, Durga Prasad. *Theory and performance of high frequency antenna*. BHU, Varanasi. Dr. K.K. Dey.

9. Singh, Prem Narayan. *Spectroscopic studies on the conformational structure of some oligosaccharides.* BHU, Varanasi. Dr. J.S. Yadav.

Chemistry

1. Dikshit, Anil Kumar. *Chemical investigation of some medicinal plants.* BHU, Varanasi. Dr. Vyas Ji Tripathi.

2. Singh, Dinesh Kumar. *Proton transfer in aprotic media.* BHU, Varanasi. Dr. S. Sengupta.

3. Singh, Meera. *Chemistry of eutectics.* BHU, Varanasi. Dr. U.S. Rai.

4. Sinha, Subhash Chandra. *Chemistry of medicinal plants.* BHU, Varanasi. Prof. A.B. Roy.

5. Srivastava, Urmila. *Coordination chemistry.* BHU, Varanasi. Dr. Bachcha Singh.

6. Verma, Neeraj. *Studies on corrosion of copper-aluminium alloys in acidic media.* BHU, Varanasi. Dr. Ravindra Nath Singh.

Earth Sciences

1. Bijendra Singh. *Theoretical and scale model studies of the transient response of layered ground including cases involving lateral inhomogenetics.* BHU, Varanasi. Prof. R.D. Singh and Shri D.G. Sharma.

2. Deshpande, Ashok Ajit. *Groundwater hydrology.* BHU, Varanasi. Prof. C.L. Singh.

BIOLOGICAL SCIENCES

Biochemistry

1. Gupta, Ashok Kumar. *Enzyme catalysis.* BHU, Varanasi. Prof. O.P. Malhotra.

2. Kshama Kumari. *Some aspects of biochemistry of morbidity in diabetes.* BHU, Varanasi. Dr. M.K. Sahib and Prof. O.P. Malhotra.

3. Ravindra Kumar. *Stress metabolism in rice.* BHU, Varanasi. Dr. R.S. Dubey.

4. Singh, Neelima. *Iron deficiency and rat brain enzymes.* BHU, Varanasi. Dr. (Mrs.) V. Taneja.

5. Srivastava, Anand Kumar. *Structure and function of ribosome.* BHU, Varanasi. Prof. D.P. Burma.

6. Tewari, Ramesh Sharan. *Enzyme-catalysed reactions.* BHU, Varanasi. Prof. O.P. Malhotra.

Microbiology

1. Singh, Ashok Kumar. *Studies on microbial degradation of some pesticides.* BHU, Varanasi. Dr. P.K. Seth,Prof. O.P. Malhotra.

Marine Biology

1. Baijendra Kumar, N. *Dentition in the cypriniforms.* U Ker, Trivandrum. Sri K.G. Padmanabhan.

2. Geetha, S. *Functional morphology of the digestive system in certain representative fishes.* U Ker, Trivandrum. Dr. H. Suryanarayanan.

3. Hemalatha, K.K. *Studies in the air bladder and weberian apparatus in cypriniforms.* U Ker, Trivandrum. Dr. P.A. John and Sri K.G. Padmanabhan.

4. Jacob, Laly. *Studies on ecophysiology of some riverine fishes of Kerala.* U Ker, Trivandrum. Dr. H. Suryanarayanan.

5. Miranda, P. Ignatius. *Studies on the brachyura. associated with algae of the Kerala coast.* U Ker, Trivandrum. Dr. H. Suryanarayanan.

6. Sreelatha, A. *Studies on Stomatopoda (Crustacea) of the South West coast of India.* U Ker, Trivandrum. Prof. P.A. John and Sri K.G. Padmanabhan.

Botany

1. Bajaj, Neena. *Algal physiology.* BHU, Varanasi. Prof. E.R.S. Talpasayi.

2. Behera, Lalit Mohan. *Inter organ relationship during leaf senescence.* Sambalpur U. Dr. Nakul Kumar Chaudhury.

3. Danawade, Laxman Nema. *Studies in aquatic plants and their utilisation for pollution removal, energy generation and manuring.* Shivaji U, Kolhapur.

4. Dash, Achyuta Nanda. *Effect of different irrigation schedules under varying levels of soil fertility and environmental conditions on physico-chemical behaviour and yield performance of rice.* Sambalpur U. Dr. P.K. Mahapatra and Dr. S.C. Panda.

5. Devashish Singh. *Ecological studies of two common grasses from Varanasi.* BHU, Varanasi. Dr. H.R. Sant.

6. Gupta, Anil Kumar. *Studies on cytology and cytotaxonomy of eukaryotic algae.* BHU, Varanasi. Prof. Y.B.K. Chowdary.

7. Kishore, Kolli Ratna. *Algal cytology and cytogenetics: Cytological and cytotaxonomical investigations in eukaryotic algae.* BHU, Varanasi. Dr. B.R. Chaudhary.

8. Roy, Sadhana. *Plant genetics.* BHU, Varanasi. Prof. S.K. Roy.

9. Sarada, Kurra. *Algal cytogenetics.* BHU, Varanasi. Prof. Y.B.K., Chowdary.

10. Shukla, Rajendra Prasad. *Mycology.* BHU, Varanasi. Prof. R.S. Dwivedi.

11. Siddiqui, Kamal Ahmad. *Plant ecology.* BHU, Varanasi. Dr. G.N. Choudhri.

12. Singh, Harsh Verdhan. *Cytotaxonomical and cytogenetical investigations of eukaryotic algae.* BHU, Varanasi. Dr. B.R. Choudhary.

13. Surendra Singh. *Virus and blue-green algae interactions.* BHU, Varanasi. Dr. A.K. Kashyap.

14. Varma, Archana. *Algal physiology.* BHU, Varanasi. Prof. E.R.S. Talpasayi.

Zoology

1. Agha, Ajai Kumar. *Studies on the endocrine and neuroendocrine physiology of teleosts.* BHU, Varanasi. Dr. K.P. Joy.

2. Archunan, G. *Pheromonal control of rodent reproduction.* BHU, Varanasi. Prof. C.J. Dominic.

3. Bhargava, Vandana. **Drosophila** *cytogenetics.* BHU, Varanasi. Dr. S.C. Lakhotia.

4. Behera, Milan Kumar. *Ecological studies on the common chrysanthemum aphid, Macrosiphoniella sanborni Gill (Aphididae: Homoptera).* Sambalpur U.

5. Chowdhuri, Debapratim Kar. **Drosophila** *cytogenetics.* BHU, Varanasi. Dr. S.C. Lakhotia.

6. Kaul, Sunil Chandra. *Cell biology.* U Delhi. Dr. G.R. Sapra.

7. Pandey, Rachana. *Comparative study of aphidian pineal organ and its function.* BHU, Baranasi. Dr. (Mrs.) C. Halder Misra.

8. Panigrahi, Bedabyasini. *Some hydrobiological and experimental aspects of certain* **Euglena** *sp in fish ponds at Sambalpur in Orissa.* Sambalpur U. Dr. Ajoy Kumar Patra.

9. Patnaik, Elizabeth. *On the ecological and eperimental aspects of certain fresh water algae in fish ponds at Sambalpur, India.* Sambalpur U. Dr. Ajoy Kumar Patra.

10. Saxena, Nayni. *Influence of pineal gland of mammals on accessory sex organs: Histology, Physiology and biochemistry.* BHU, Varanasi. Dr. C. Halder Mishra.

11. Singh, Amar Pal. *Sex chromosomes and mammalian spermatogenesis.* BHU, Varanasi. Dr. Rajiva Raman.

12. Singh, Pratap Ram Bahadur. *Endocrine physiology o reproduction.* BHU, Varanasi. Dr. T.P. Singh.

Medical Sciences

1. Agrawal, Aruna. *Stress, stress reaction and adaptation pattern in relation to different body types.* BHU, Varanasi. Dr. K.N. Udupa and Dr. G.P. Dubey.

2. Bhattacharyya, Snigdha. *Investigations on fungal toxins.* BHU, Varanasi. Prof. D.K. Das.

3. Chaube, Saroj Kumar. *Cultivation of medicinal plants*. BHU, Varanasi. Prof. S.N. Tripathi.

4. Goel, Satish Chandra. *Comparison of efficacy of demineralised bone matrix and bio-implants in bridging of large osteoperiosteal gaps*. BHU, Varanasi. Prof. S.M. Tuli.

5. Gupta, Suresh Chandra. *Electro encephalographic pattern in relation to different personality types under stressful situations*. BHU, Varanasi. Dr. G.P. Dubey.

6. Hota, Vijaya Laxmi. *Histological study of pancreas with particular reference to the islets of Langerhans: A comparative study*. Sambalpur U. Dr. Laxmi Kanta Tripathy.

7. Jha, Arvind Kumar. *Phytochemical investigations of some indigenous medicinal plants and screening them for antimalarial activity*. HS Gour, Sagar. Dr. P. Misra.

8. Mallick, Shipra. *Identification of uronic toxins in renal failure*. BHU, Varanasi. Dr. R.G. Singh.

9. Misra, Usha Rani. *Management of dashika ashrigdara in relation to prakritis*. BHU, Varanasi. Prof. (Km.) P.V. Tewari.

10. Pandey, Anil Kumar. *Male infertility and filariasis: An aetiological view point*. BHU, Varanasi. Prof. V.N.P. Tripathi.

11. Pandey, Asha. *Role of dietary selenium on human heart diseases*. U Delhi. Dr. (Mrs.) Usha Bhargava.

12. Raza, Mohammad Javed. *Study of larvivorous fishes and their role in control of mosquito population*. BHU, Varanasi. Prof. S.D. Gaur.

13. Roy, Chandra Kumar. *A study of few untoward effects of chloramphenicol and a search for their correctives from the ayurved pharmacopaea*. BHU, Varanasi. Dr. J.K. Ojha and Dr. Ramaharsh Singh.

14. Singh, Anubha. *Evaluation of regenerative capacity of the kidney in experimental bacterial pyonephritis and U.T.I. and role of indigenous drugs*. BHU, Varanasi. Dr. R.G. Singh and Dr. R.H. Singh.

15. Singh, Ram Dular. *Effect of iron supplementation on mental function*. BHU, Varanasi. Dr. A.M Tripathi.

16. Upadhyaya, Lokesh. *Endocrine and metabolic changes following yoga therapy*. BHU, Varanasi. Prof. K.N. Udupa and Dr. G.P. Dubey.

17. Upadhyay, Om Prakash. *Natural profile of diabetes mellitus: Clinical study with special reference to indigenous drugs*. BHU, Varanasi. Dr. J.K. Ojha and Prof. H.S. Bajpai.

18. Vineet Kumar. *A psychobiological study on the ayurvedic concept of prajnaparadha*. BHU, Varanasi. Prof. H.C. Shukla and Dr. R.H. Singh.

Agriculture

1. Agarwal, Lalji. *Ecology of soil insects*. BHU, Varanasi. Dr. J. Singh.

2. Chaubey, Saroj Kumar. *Studies on insect pest of maize*. BHU, Varanasi. Dr. D.S. Mishra.

3. Chaubey, P.K. *Genetical studies in rice*. BHU, Varanasi. Dr. A.K. Richaria.

4. Choudhary, Ram Gopal. *Population dynamics of rice gundhi bug*. BHU, Varanasi. Dr. D.S. Misra.

5. Dhar Singh. *Studies on plant parasitic nematodes, population dynamics and control*. BHU, Varanasi. Dr. H.K. Singh.

6. Dwivedi, Narendra Narayan. *Nutritional studies in cow pea*. BHU, Varanasi. Prof. C.B.S. Rajput.

7. Giri, Sheo Prasad. *Linkage studies in rice*. BHU, Varanasi. Dr. A.K. Richaria.

8. Laxmi Shankar. *Population dynamics of rice leaf and plant hopper*. BHU, Varanasi. Dr. D.S. Mishra.

9. Major Singh. *Genetics of nitrogen fixation*. BHU, Varanasi. Dr. V.P. Singh.

10. Mathew, Victor George. *Decomposition of litter by fungi in aquatic ecosystem*. BHU, Varanasi. Dr. Ram Dayal.

11. Misra, Budhadev. *Effect of some fungicides on soil microflora*, BHU, Varanasi. Dr. Ram Dayal.

12. Raghawendra Singh. *Genetic architecture of yield traits of induced mutants in rice,* **Oryza sativa** L. BHU, Varanasi. Dr. J. Singh.

13. Ramalingareddy, Kalluri. *Giemsa C banding analysis in* **Vigna** *and* **Cajanus** *sp*. BHU, Varanasi. Dr. U.P. Singh.

14. Ram, Ram Briksh. *Stability studies in rice*. BHU, Varanasi. Dr. A.K. Richaria.

15. Reddy, Rondlathirupathi. *Mapping of stem and leaf rust resistance genes on specific chromosomes following monosomic analysis in wheat*. BHU, Varanasi. Dr. U.P. Singh.

16. Sharma, Kailash Nath. *Metabolism of phosphorus at different growth stages of rice*. BHU, Varanasi. Dr. B. Singh and Dr. R.S. Dubey.

17. Singh, Chandra Pati. *Genetic studies on powdery mildew resistance in pea*. BHU, Varanasi. Dr. U.P. Singh.

18. Singh, Hemant Kumar. *Ovicidal action of certain insecticides*. BHU, Varanasi. Dr. H.N. Singh.

19. Singh, N.P. *Genetics of yield and yield traits with special reference to disease*. BHU, Varanasi. Prof. R.M. Singh.

20. Singh, Rajendra Nath. *Phytophagus mites*. BHU, Varanasi. Dr. J. Singh.

21. Singh, Rajesh Kumar. *Nutritional studies in pea*. BHU, Varanasi. Prof. C.B.S. Rajput.

22. Singh, Ravindra Nath. *Studies on phyto-nematodes associated with cultivated crops*. BHU, Varanasi. Dr. H.K. Singh.

23. Singh, Vinai Kumar. *Studies on acetyl cholinesterase and carboxy-esterase in developing eggs of Indian gypsy moth*. BHU, Varanasi. Dr. H.N. Singh.

24. Sinha, P.K. *Studies on downing mildew of pea*. BHU, Varanasi. Dr. U.P. Singh.

25. Srivastava, J.M. *Cytogenetics studies in safflower*. BHU, Varanasi. Dr. H. Kumar.

26. Udaya Lakshmi, Adusumilli. *Studies on acetyl cholinesterase and carboxy-esterase in insect*. BHU, Varanasi. Dr. H.N. Singh.

27. Yadav, Banarsi. *Genetic studies on yield and yield components in safflower*. BHU, Varanasi. Dr. H. Kumar.

Veterinary Science

1. Ravindra Singh. *Studies on the utilization of roughages by ruminants*. BHU, Varanasi. Dr. V.N. Bhargava.

2. Sharma, Surendra Nath. *Impact of urea feeding in different forms in cattle*. BHU, Varanasi. Dr. N.N. Pandita.

3. Singh, Ashok Kumar. *Protein requirements for milk production*. BHU, Varanasi. Dr. V.N. Bhargava.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Bhardwaj J.S. *Orthogonal polynomials and non-linear differential equations.* RDV, Jabalpur.

2. Ghosh, Sankar. *Some problems of the theory of measures, specially the probability measures.* U Calcutta.

3. Harvir Singh. *A study of mean values and growth properties of entire functions with index pair (P.Q.)* U Roorkee.

4. Mohan Singh. *Finitistic and locally finitistic spaces.* U Jammu.

5. Muttepawar, Subash. *Sheaf theoretic cohomological dimension and tautness.* U Jammu.

6. Prabhulingappa, Halakatti Suidhani Chennadevi. *Topics in cosmology and relativity : A contribution to pre-big-bang theory and arrow of time.* Kar U, Dharwad.

7. Radhakrishnaeswara Raju, S. *Some types of complemented subspaces in banach spaces.* U Hyderabad.

8. Surjeet Kaur. *Theoretical studies in mathematical programming.* U Delhi.

Physics

1. Ashok Nath. *Study of magnetic and optical behaviours of some rare earth complexes.* NBU, Rajarammohunpur.

2. Bhattacharya, Purabi. *X-ray spectroscopic studies of some complexes of copper and cobalt.* ISM, Dhanbad.

3. Chaudhury, Nalin Kanta. *Flow and heat transfer in viscoelastic fluid.* Utkal U, Bhubaneswar.

4. De, Sitangshusekhar. *Studies on the radio interference in the VHF band.* U Calcutta.

5. Kartar Singh. *Investigations of iron containing alloys and cement.* U Roorkee.

6. Mandal, Pranati. *Studies on hyperfragments produced in 1.8 ger/ck interactions with emulsion nuclei.* U Calcutta.

7. Mohan Lal. *Contributions to transducers and their applications using Fet and IC circuit instrumentation.* Meerut U.

8. Sarkar, Asok Kumar. *Study of II-electronic spectra of some aromatic molecules.* U Calcutta.

9. Sharma, H.V. *Electronic and magnetic properties of mixed valence systems.* U Roorkee.

10. Singh, Y.K. *The behaviour and modelling of the excitable nerve membrane under different environmental conditions.* U Roorkee.

11. Sridhar, N. *Study of some aspects of high mode generation and control in uniform and dual depth circular corrugated wave guide feeds.* U Delhi.

12. Sutradhar, Sanatkumar. *Electron transport in some semiconducting alloys.* U Calcutta.

13. Venkateswara Rao, J. *Phase transition studies on polymorphic* liquid crystals. Nagarjuna U.

Chemistry

1. Agarwal, Sharad. *Synthesis and polarographic reduction of pyrozoles, pyrazolines and coupled products of amino benzathin different solvents and solubilized systems.* U Roorkee.

2. Bhattacharyya, Kankan. *Spectrochemical studies of some double molecules in condensed phase using tunable pulsed dye laser.* U Calcutta.

3. Biswas, Swapna. *Studies on terpenoids and plant phenolics.* U Calcutta.

4. Chattopadhyay, Partha. *Extractive, photometric, gravimetric and characteristics studies on complexes of some heavy metals.* NBU, Rajarammohunpur.

5. Choudary, N. Venkateswarlu. *A study in thermodynamic properties of organic liquid mixtures.* SVU, Tirupati.

6. Dasgupta, Amitabha. *Use of new chelating resins with sulphur containing group in the separation of noble metals and mercury.* U Calcutta.

7. Dash, Bhabagrahi. *Search for physiologically active new heterocycles.* Berhampur U.

8. Deb, Barun Kanti. *Studies on organotin coordination compounds: An investigation on beta-carboalkoxy alkyl tin complexes of some ligands.* NBU, Rajarammohunpur.

9. Dwivedi, Narbdeshwar. *Structural investigation of chemical constituents of some medicinal plants.* Mag U, Bodh Gaya.

10. Gogia, Surendra Kumar. *Studies on synergism in the extraction of some metal carboxylates and the extraction of metal citrate complexes by high molecular weight amines.* U Roorkee.

11. Gupta, Niranjan Swarup. *A study of some tripositive lanthanide chelates of oxime containing ligands.* Meerut U.

12. Hankare, Prakash Pandurang. *X-ray photoelectron and X-ray absorption spectral studies of coordination compounds.* Shivaji U, Kolhapur.

13. Haque, Mohammad Azizul. *Some application of the methods of molecular quantum mechanics to chemrical problems.* U Calcutta.

14. Katyal, Anita. *Study of electrochemical properties of some phenolic copolymers and their interaction with some transition metal ions.* U Delhi.

15. Laxmi, V.V. *Studies on the mineralogy and cation exchange behaviour of some saline soils of Haryana, India.* U Delhi.

16. Mittal, R.S. *Studies on chemical transformation of polyphenols by higher valent metal ions.* Meerut U.

17. Mukherjee, Keya. *Studies in isopentenylation and cinnamylation of phenolic compounds.* U Delhi.

18. Pal, Dhananjay. *Use of binary system of accelerators in the vulcanization of natural rubber.* U Calcutta.

19. Patil, Vasant Ramdas. *Physico-chemical studies of some transition metal complexes.* Nagpur U.

20. Rajendra Naidu, G. *Thermodynamics of solutions.* SVU, Tirupati.

21. Rama Rao, G. Seetha. *Electrochemical reductions: Voltammetry of Se, Te, Cd, Zn and In in semiconductor materials.* SVU, Tirupati.

22. Rambabu, Chintala. *Physico-chemical investigations of some aryl hydrazines in aquo-organic media.* Andhra U, Waltair.

23. Ravindranath, L.K. *Studies in organic polarography: Electro-reduction of substituted* 1*-phenyl* 1-3*-amino-*4*-arylazopyrazoline-*5*-one.* SKU, Anantapur.

24. Rawat, Mohan Sngh Maniyari. *Study of photo-chromism in organic compounds: Photochromism in Schiff's bases and hydrazones.* IIT, Delhi.

25. Sarkar, Swapan Kumar. *Behaviour of phosphatic compounds in soil.* ISM, Dhanbad.

26. Sharma, Anand Kumar. *Preparation and characterisation of some organotitanium (IV) and zirconium (IV) derivatives.* U Delhi.

27. Sharma, Ramesh Chand. *A systematic study of cyclopentedienyl, indenyl or cycloheptatrienyl and cyclotetraenyl derivatives of antimony (III).* Meerut U.

28. Sharma, Varun Kumar. *Synthetic studies in naturally occurring polyphenolics.* U Delhi.

29. Singh, Chhabi Nath. *Use of acyl groups in the protection of hydroxyl and amino functions of nucleosides and nucleotides and their removal by the enzymes.* Meerut U.

30. Singh, Shailendra Kumar. *Physico-chemical studies on the chelation behaviour of acenaphthenequinone monothiosemicarbazone (AQTS) and phenanthraquinone monosemicarbazone (PQS) with transition and rare earth elements.* U Delhi.

31. Suryanarayana, G.V. *Studies on high polymer systems.* Utkal U, Bhubaneswar.

32. Vara Prasad, A.R.K. *Some additions and improvements in the redox titrimetry of iron (II), arsenic (III) and antimony (III).* Nagarjuna U.

Earth Sciences

1. Mishra, Janardan. *Geomophic study of Morhar-Surhar Basin, Bihar.* Mag U, Bodh Gaya.

2. Punwatkar, Vilas. *Study of fluorite deposits and associated granite rock of Chandidongri District, Rajnandgaon, M.P. with emphasis on its petrogenesis mode of occurrence, prospecting, pregrading and beneficiation.* Bhopal U.

3. Sarma, Ramendra Nath. *Sedimentology and geochemistry of the sandstones of the Disang and Barail groups, Kohima, Nagaland.* Gauhati U.

Engineering & Technology

1. Bansal, V.K. *Design and development of reliability analyser.* U Roorkee.

2. Garg, Amita. *Syndet pollution and its abatement.* U Roorkee.

3. Govind Rao, B. *Behaviour of skirted granular pile foundation.* U Roorkee.

4. Jain, S.C. *Effects of bearing deformation on the performance of hydrodynamic bearings.* U Roorkee.

5. Mathur, V.N.S. *Thermodynamics of dilute solutions of zinc in molten binary substitutional solvent at 773°K.* U Roorkee.

6. Muniswamy, V.V. *Studies in cyclone disaster management: A computer simulation approach.* SVU, Tirupati.

7. Palaniswamy, K.A. *Generation scheduling under emergency mode of operation.* U Roorkee.

8. Pandey, K.S. *Densification behaviour of iron and iron based alloy powder reforms during hot forging.* U Roorkee.

9. Paraskar, Wasantrao Daulatrao. *Dynamic over-voltages in the power system.* Nagpur U.

10. Ponnavaikko, M. *On some aspects of optimal distribution system planning.* IIT, Delhi.

11. Sharma, S.S. *Non-linear analysis of reinforced concrete framed structures.* U Roorkee.

12. Singal, L.C. *Heat transfer and pressure drop in forced convection boiling of refrigerant mixture inside horizontal tubes.* U Roorkee.

13. Syed Khalid. *A study of stresses and deformations in rockfill dam with face membrane.* U Roorkee.

14. Tyagi, Gaj Raj Singh. *Behaviour of battered piles.* U Roorkee.

15. Wadhwa, S. S. *Bearing with compressible fluid.* U Roorkee.

CLASSIFIED ADVERTISEMENTS

ENGINEERING COLLEGE

KOTA-324007

Advertisement No. E2/83-84

Applications for the posts of Readers (Civil Engg. 3, Electrical Engg. 1, Mechanical Engg. 2) and Lecturers (Civil Engg. 6, Electrical Engg. 4, Mechanical Engg. 5, Mathematics 2, Physics 1, Geology 1, English 1, Humanities 1) are invited. Candidates may apply, giving their bio-data alongwith a crossed I.P.O. for Rs 7.50.

The bio-data sent should specifically include (1) Name and address in bold letters (2) Date of birth (3) Educational Qualifications giving divisions and percentage of marks from High School and above (4) Experience (5) Details of other academic and professional achievement (6) Details of publications, prizes won (7) Details of extra curricular activities (8) Present pay (9) Pay demanded (10) Membership of professional bodies (11) Other remarks if any. The IPO should be drawn in favour of "The Engineering College, Kota" payable at 'KOTA' post office. Applications without the required postal order will be rejected.

LAST DATE for receipt of applications is **7th May, 1984.**

The post carry UGC scales of pay. The benefit of CPF, Gratuity, DA and HRA is admissible as per rules of the College, which are as approved by the Government of Rajasthan. Candidates aged 55 years or above but below 60 could be considered for appointment, if found suitable, either on contract basis or on temporary basis. Higher starting pay is also permissible. The College reserves the right to increase or decrease the number of posts and also the right not to fill any of the posts.

MINIMUM QUALIFICATIONS

READERS IN ENGG.

Good academic record with a Doctor's degree in the relevant field. About 5 years experience of teaching and/or research and development

Provided further that candidates not possessing Ph.D. may be considered if they have to their credit equivalent published research work or design/development work of a high order either in the institution or in an industry.

OR

In the case of persons to be recruited from industry or professional fields, candidates should prossess good academic record with recognised professional work of about 7 years which should include innovation and/or research and development.

LECTURERS IN ENGG.

(a) Master's degree in appropriate field in Engg./Technology.

(b) Consistently good academic record with a Bachelor's degree in Engineering/Technology. I class at Bachelor's degree and/or Master's degree level.

(c) One year's relevant professional experience outside academic/research institution.

Having regard to the requirements of emerging fields of Engineering of Developing-interdisciplinary programmes, the requirements of engineering technology, degree may be waived in the cases of otherwise well qualified candidates.

Provided further that if a candidate does dot possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of five years of his appointment failing which he will not be able to earn future increments, until he fulfils this requirement.

For Lecturers (Electrical), the BE or ME Degree could be either in Electrical Engineering or in Electronics and Electrical Communication Engineering.

If candidates with M.Tech/M.E. qualifications are not available or such candidates are not found suitable for appointment, candidate with Ist class BE Degree could be considered for appointment. However, such candidates will have to obtain M.Tech/M.E. Degree within a period of 5 years from the date of their joining the post failing which they shall not be entitled for drawing further increments.

Lecturers (Non-Technical) Mathematics, Physics, Geology, English & Humanities.

(a) A Doctor's degree or research work of an equally high standard; and

(b) Consistently good academic record with 1st or high 2nd class (B in the seven point scale) Master's degree in a relevant subject or an equivalent degree of a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degree in (a) and (b) above may be in relevant subjects. For the post of Lecturer in Humanities the subject may be Political Science/Economics/History/Sociology.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing consistently a good academic record, (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within five years of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

BIRSA AGRICULTURAL UNIVERSITY RANCHI-834007

Advt. No. 1/84.

Applications are invited for a few posts of Assistant Professor-cum-Junior Scientist, Faculty of Forestry in the pay scale of Rs. 700-1600 p.m. plus usual allowances so as to reach the undersigned alongwith I.P.O. for Rs 10/- (Rs. 2.50/- for SC/ST) by **10.5.1984**. The posts are exclusively Reserved for ST/SC/Backward/Economically backward/Extremely backward and Women candidates as per Govt. rules.

Qualifications

(i) A.I.F.C. with Second Class Master's degree in Basic Science or Agricultural Science for ST/SC and High Second Class for others

OR

Second Class Master's Degree in Botany, Zoology, Geology or Agriculture (Agronomy/Plant Breeding/Plant Pathology/Entomology Horticulture/Soil Science) for ST/SC and High Second Class for others.

Such candidates who have Master's Degree in Basic Science or Agriculture will have to take Forestry Training, if required.

(ii) Maximum age should not exceed 29 years on 1.1.1984. Relaxable for ST/SC as per Govt. rules.

(iii) Doctorate Degree in the subject concerned is desirable.

(iv) Two years experience of teaching/research/field work.

NOTE: The University reserves the right to increase or decrease the number of vacancy/vacancies or to withdraw the same at any stage of this advertisement. Application forms and details can be obtained from Recruitment Officer, Birsa Agricultural University. Ranchi Veterinary College Campus, Ranchi-834007, by making a written request accompanied by self addressed stamped (Rs. 3.95 for Regd.) envelope of 23x10 c.m. alongwith I.P.O. for Rs. 5/- as the cost of application form, drawn in favour of the Comptroller, Birsa Agricultural University, Ranchi-834007.

R.P. Singh
Recruitment Officer

NORTH-EASTERN HILL UNIVERSITY SHILLONG-793014

Advt. No-I

Applications are invited for the post of two Junior Research Fellows @ Rs. 600/- per month to work in a "Forest Pathology Scheme", Sponsored by the CSIR, under the Supervision of Dr,B.K. Dutta. The candidate should have a good academic record with first class/high Second class in B.Sc and M.Sc. degree in Botany, preferably with specialization in Plant Pathology/Taxonomy.

Applications in plain paper with complete Bio-Data should reach Dr. B.K. Dutta, Department of Botany, North-Eastern Hill University, Shillong 793014, within 15 days of the appearance of this advertisement.

REGISTRAR

Indian Institute of Technology, Bombay

P.O. IIT, Powai, Bombay-400 076

Advertisement No. A-195/84

Applications are invited for a faculty position at the level of Associate Professor or Assistant Professor in the Industrial Design Centre for the Master of Design Degree Programme in Visual Communication starting from August 1984 for teaching courses in the following areas:

(a) Visual Design: advanced studies and applications

(b) Design Philosophy, Theory and Principles

(c) Social and Environmental Design

(d) Design Semantics and Semiotics

(e) Environmental Awareness and Education

Qualification & Experience

Postgraduate qualification in Design/Visual Communication. Relaxable in case of candidates with exceptional teaching research/practical experience in the areas mentioned above. The appointment may be made at a suitable level as Associate Professor or Assistant Professor depending on the qualification and experience of the candidate.

Scale of Pay

1. Associate Professor: Rs. 1500-60-1800-100-2000.
2. Assistant Professor: Rs. 1200-50-1300-60-1900.

Total emoluments on the minimum of the scale excluding H.R.A.

on basic pay Rs. 1500/- : total emoluments Rs. 2575/-

On basic pay Rs. 1200/- : total emoluments Rs. 2275/-

The post is permanent and carry allowances such as D.A., C.C.A., H.R.A., as per rules of the Institute which correspond to those applicable to the Central Government employees stationed at Bombay. Applications should be made on the prescribed form obtainable free of charge from the Registrar, Indian Institute of Technology, P.O. I.I.T., Powai, Bombay-76, by sending a self-addressed envelope of 25 cm × 10 cm size. Indian candidates abroad may apply on plain paper in duplicate. Candidates employed in Government/Semi Government Organisations or Educational Institutions should apply through proper channel. Completed applications should reach the Registrar, Indian Institute of Technology P.O. I.I.T., Powai, Bombay-400 076 by **16th May, 1984.**

SAMBALPUR UNIVERSITY

JYOTI VIHAR : BURLA
SAMBALPUR (ORISSA)
Pin-768019

TEACHING POSTS IN UNIVERSITY POSTGRADUATE DEPARTMENTS, UNIVERSITY COLLEGE OF ENGINEERING AND LAJPAT RAI LAW COLLEGE

Advertisement No. 6855/Estt. II **Dated 23-3-1984.**

(I) Applications are invited in the prescribed forms for the following teaching posts in the University P.G. Departments at Jyoti Vihar, Burla; University College of Engineering, Burla and Lajpat Rai Law College, Sambalpur (These two colleges are constituent colleges of the University).

(A) UNIVERSITY P.G. DEPARTMENTS, JYOTI VIHAR, BURLA

Sl. No.	Subject	Post	Number	Specialisation
1.	Chemistry	Professor	One	Physical/Industrial Chemistry/Analytical Chemistry Corresponding
		Reader	One	
		Lecturer	Two	
2.	Life Sciences	Professor	One	Bio-Chemistry
		Reader	One	Microbial Physiology/ Ecology
		Lecturer	Two	Forest Ecology-1 Developmental Biology-1
3.	History	Professor	One	History of Indian Culture
		Lecturer	Two	Modern History/Indian Culture
4.	Physics	Reader	One	Electronics
		Lecturer	Two	—
5.	Mathematics	Reader	One	Applied Mathematics
		Lecturer	One	—
6.	English	Reader	One	Linguistics and English Language Teaching
		Lecturer	One	—
7.	Sociology & Social Anthropology	Professor	One	Sociology
		Reader (Temporary, likely to be permanent)	One	Sociology
		Lecturer	One	Physical Anthropology
8.	Home Science	Reader	One	—
9.	Library & Information Science	Reader	One	—
10.	Geology	Professor	One	—
		Reader	Two	—
		Lecturer	Two	—
11.	Statistics	Lecturer	One	

(B) L.R. LAW COLLEGE, SAMBALPUR

1.		Principal (Temporary)	One	In the Scale of Pay of Rs. 1200-50-1300-60-1900/-.
2.	Law	Lecturer	Two	—

(C) UNIVERSITY COLLEGE OF ENGINEERING, BURLA

1.	Civil Engineering	Lecturer	One
2.	Mechanical Engineering	Lecturer	Two
3.	Electrical Engineering	Lecturer	Two
4.	Electronics & Tele-Communication Engineering	Lecturer	Three

(D) UNIVERSITY COLLEGE OF ENGINEERING, BURLA

1.	Mathematics	Professor	One	Applied Mathematics

(II) Scale of Pay

(i) Professor : Rs. 1500-60-1800-100-2000-125/2-2500/-.

(ii) Reader: Rs. 1200-50-1300-60-1900/-

(iii) Lecturer: Rs. 700-40-1100-50-1600/-

The posts carry usual benefits as per rules of the University.

(III) **Age of Superannuation :** 60 (Sixty) years.

(IV) Essential Qualifications

Qualifications for Category (A)

1. Professor

(i) A good academic record with first or second class Master's Degree in the concerned subject from any recognised Indian University OR an equivalent Degree from a foreign University with at least B+ Grade;

(ii) A Doctorate Degree in the Subject;

(iii) Minimum experience of ten years' teaching and/or research out of which at least seven years shall be in teaching at Post-Graduate/Honours level;

(iv) Experience in guiding research at Doctoral level;

(v) Evidence of being an eminent Scholar with published work of high quality and of being actively engaged in research.

OR

In exceptional cases if, in the opinion of the concerned authority a candidate is an outstanding Scholar with established reputation, who has made significant contribution to the knowledge in the concerned discipline, he/she can also be considered for appointment.

Note

The qualification prescribed in (ii) above may be relaxed in case of a candidate who possesses the qualifications prescribed in (i), (iii), (iv) and (v) above, and in that case at least one of his Scholars should have been awarded Ph.D. degree by the last date of the receipt of applications by the University.

2. Reader

(i) A good academic record with first or second class Master's degree in the concerned subject from any recognised Indian University OR an equivalent degree from a foreign University with atleast B+grade;

(ii) A Doctorate degree in the subject or equivalent published work;

(iii) Evidence of being actively engaged in (a) Research OR (b) Innovation in Teaching Methods OR (c) Production of Teaching Materials;

(iv) Eight years' experience of teaching and/or research out of which at least five years shall be as a teacher at the Post-Graduate/Honours level.

3. Lecturer

(i) Master's degree in the subject with atleast 54% of marks from any recognised Indian University or an equivalent degree from a foreign University with atleast B+grade provided that this qualification may be relaxed in case of a candidate having a Second Class Master's degree and a Doctorate degree,

(ii) A good academic record or a Doctorate degree in the subject or research work of an equally high standard,

Note

(Applicable to posts of Lecturer of this category)

(a) If the concerned authority is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (ii) above.

(b) Having regard to the need for developing interdisciplinary programmes, the degrees in (i) and in (ii) above may be in any of the subjects, relevant to the concerned subject.

(c) If no candidate possessing a doctorate degree or equivalent research work is available or no such candidate is considered suitable, a person possessing a good academic record (weightage being given to M. Phil or equivalent degree or research work for quality), may be appointed provided he/she has done research work for at least two years or has practical experience in a research laboratory/organisation on the condition that he/she will have to obtain a Doctorate degree or give evidence of research of a high standard within eight years of his appointment, failing which he/she will not be able to earn future increments until he/she fulfils these requirements.

Explanation: : (Applicable to posts of Readers & Lecturers of this Category).

For determining "good academic record" the following criteria shall be adopted:

(i) a candidate holding a Ph.D. degree should possess at least a Second Class Master's degree;

(ii) a candidate without a Ph.D. degree should possess a high Second Class Master's degree and Second Class in the Bachelor's degree;

(iii) a candidate not possessing Ph.D. degree but possessing Second Class Master's degree should have obtained First Class Honours in the Bachelor's degree examination'

Qualifications for Category (B)

1. Principal

(i) A good academic record with LL.M. degree from any recognised Indian University or an equivalent degree from a foreign University.

(ii) A Doctorate degree in the subject or equivalent published work.

(iii) Minimum eight years' teaching and/or professional and/or research experience out of which five years must be as a teacher in Law College.

(iv) Evidence of active participation in research.

Note: Professional experience will include experience in the bar as well as in the Bench.

2. Lecturer

(i) Good academic record with LL.M. degree from any recognised Indian University or an equivalent degree from a foreign University.

Note: The qualification prescribed above may be relaxed in case of a candidate having LL.B. degree and five years of professional experience in Law, provided that the candidate acquires the LL.M. degree within a period of five years, failing which he/she will not earn any future increment.

Qualifications for Category
Lecturer

Master's degree in the appropriate field of Engineering/Technology,

Provided that in case suitable candidates possessing above qualification are not available, candidates with 1st Class Bachelor's degree and good academic career may be appointed on condition that they obtain the desired qualification within a period of five years failing which no future increments will be granted until the above qualification is obtained.

Qualifications for Category (D)
Professor

(i) A good, academic record with first or second class Master's degree in the concerned subject from any recognised Indian University OR an equivalent degree from a foreign University with at least B+grade;

(ii) A Doctorate degree in the subject;

(iii) Minimum experience of 10 years' teaching and/or research out of which at least 7 years shall be in teaching at P.G./Honours/Engineering degree level;

(iv) Experience in guiding research at Doctoral level;

(v) Evidence of being an eminent Scholar with published work of high quality and of being actively engaged in research.

OR

In exceptional cases if, in the opinion of the concerned authority a candidate is an outstanding Scholar with established reputation who has made significant contribution to the knowledge in the relevant discipline, he/she can also be considered for appointment.

(vi) Teaching experience in Engineering College/Institute of Degree standard can be regarded as a desirable qualification.

Note : The qualification, prescribed in (ii) above may be relaxed in the case of a candidate who possesses the qualifications prescribed in (i), (iii), (iv) and (v) above, and in that case at least one of his Scholars should have been awarded Ph.D. degree by the last date of the receipt of applications by the University.

(V) Instructions

1. Seven copies of the application form will be supplied from the University Office to each candidate in person on cash payment of Rs. 15/- (Rupees fifteen) only. Candidates intending to receive forms by post are required to send (a) Crossed Postal Order of Rs. 15/- payable to the Finance Officer, Sambalpur University, Jyoti Vihar, Burla, and (b) a self-addressed envelope (23cm × 19cm) with postage stamps worth Rs. 4.25 p. affixed to it with the words "APPLICATION FORM FOR TEACHING POSTS IN SAMBALPUR UNIVERSITY" superscribed on it. **Money Order/Cheque will not be entertained.**
2. Each prescribed application form duly filled in by the candidate must carry attested copies of all certificates, mark sheets, evidence of teaching experience, testimonials and other publications. **Applications incomplete in any manner are liable to be summarily rejected.**
3. Candidates who are abroad may apply on plain paper giving their full bio-data alongwith the copies of their certificates, mark-sheets and reprints of published papers.
4. Candidates in service, should route one copy of their applications through proper channel. No applicant will be interviewed unless his/her application has been duly transmitted through his/her employer or he/she produces a "No objection Certificate" from his/her employer at the time of interview.
5. All applications are to be addressed to the undersigned by designation and not by name.
6. The last date of receipt of applications in the Office of the University at Jyoti Vihar, Burla, Pin-768 019, Sambalpur (Orissa) is **10-5-1984,** and applications received after the due date will not be considered.
7. The candidates will be required to appear for an interview before a Selection Committee at their own expense. For the post of Professor interview shall include a Seminar.
8. All correspondence will be made by designation only.
9. Issue of this advertisement does not make it binding on the University to make appointment.
10. The number of vacancies indicated in (I) is tentative.
11. Retired persons who have not attained the age of sixty-five years may also apply for appointment on a contract basis.

N.K. Pujahari
REGISTRAR

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19 JUN 1984
C.F.T.R.I., MYSORE

पंचम
समारो
विश्वविद्यालय

Photograph taken on the occasion of the Fifth Convocation of the Avadh University. Seen above (from L to R) are : Prof. M.V. Mathur, former Director of National Staff College for Educational Planners and Administrators and Dr. A. P. Mehrotra, Vice-Chancellor of the University.

A.I.U. PUBLICATIONS

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Editor :
M.S. RAMAMURTHY

UGC Annual Report for 1982-83 Reveals Increase in Student Enrolment in Universities and Colleges

There has been an increase of 6.3 per cent in student enrolment in the universities and colleges, 2 new universities were set up, 153 new colleges were started and 6 per cent more teachers were employed during 1982-83, compared to the preceding year. This has been stated in the Annual Report of the University Grants Commission for the year 1982-83 which has now been released.

According to the Report, during 1982-83, there were 31,36,986 students enrolled in as many as 120 universities, 13 institutions deemed to be universities and 5012 colleges, against an enrolment of 29,52,066 in 118 universities, 13 institutions deemed to be universities and 4886 colleges during 1981-82, thus showing an increase of 6.3 per cent over the preceding year. There were 21,68,107 students enrolled in 90 universities, 9 institution deemed to be universities and 4158 colleges during 1972-73 which shows an increase of 44.6% during the last decade.

Faculty-wise student enrolment in universities and colleges with percentage of the total enrolment (given in brackets) during 1982-83 was—Arts including Oriental Languages 1245548 (39.7%), Science 619100 (19.7%), Commerce 684210 (21.8%), Education 72474 (2.3%), Engineering and Technology 142583 (4.5%), Medicine 116893 (3.7%), Agriculture 40139 (1.3%), Veterinary Science 8732 (0.3%), Law 186988 (6.0%) and others 20313 (0.7%).

The faculty-wise distribution of student enrolment from 1978-79 to 1982-83 showed that the percentage of enrolment in the faculty of Arts (including oriental learning) to the total enrolment has been going down gradually from 42.3 in 1978-79 to 40.6 in 1979-80, 40.5 in 1980-81, 40.3 in 1981-82 and 39.7 in 1982-83. However, the percentage of students enrolled in commerce courses has gone up from 18.8 in 1978-79 to 19.5 in 1979-80, 20.1 in 1980-81, 21.3 in 1981-82 and 21.8 in 1982-83. Similar trend was observed in the case of science faculty where percentage enrolment gradually went up from 18.8 in 1978-79 to 19.2 in 1979-80, 19.4 in 1980-81, 19.6 in 1981-82 and 19.7 in 1982-83. Percentage enrolment in the medicine faculty steadily declined from 4.3 in 1978-79 to 3.7 in 1982-83.

Women's Enrolment

There has been a spectacular growth in the women enrolment in the institutions of higher learning in the country which has gone up from 40 thousand in 1950-51 to 8 lakh, 93 thousand, in 1982-83, i.e. more than twenty times during the past thirty years or so.

According to the Report, women's enrolment in the universities and colleges rose to 84,000 in 1955-56, 1,50,000 in 1960-61, 2,71,000 in 1965-66, 5,95,000 in 1975-76, 7,49,000 in 1980-81 and 8,17,000 in 1981-82. The proportion of women enrolment per hundred men also increased by about three fold from 14 in 1950-51 to 40 in 1982-83. Likewise the enrolment of women, as a percentage of total enrolment (both men and women) also increased from 22.7 per cent in 1971-72 (women enrolment 4,68,696, total enrolment 20,65,041) to 28.5 per cent in 1982-83 (women enrolment 8,92,637, total enrolment 31,36,986).

During 1982-83, the proportion of women's enrolment to total enrolment was maximum in the State of Kerala i.e. 48.2 per cent

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followed by the Union Territory of Delhi (47.7), Punjab (41.9) and Jammu & Kashmir (41.8). Stage-wise percentage of women enrolment at the graduate, post-graduate and research levels was 28.4, 29.8 and 26.6 respectively and the faculty-wise was 56.3 percent in education, followed by arts (40.5), science (29.4), medicine (27.5) and commerce (15) during 1982-83.

Women's Colleges

The Annual Report further says that number of colleges exclusively for women also went up by 21 percent over the period 1974-75 to 1982-83. In absolute terms, the number increased from 506 in 1974-75 to 528 in 1975-76, 543 in 1976-77, 577 in 1979-80, 609 in 1980-81, 624 in 1981-82 and 643 in 1982-83.

Women in Research

The participation of women in research in the universities has increased considerably with the result that a number of major and minor projects funded by the University Grants Commission and other agencies have been taken up by women as principal investigators and research staff on projects. The number of women selected in faculty improvement programmes and for the award of research associateships, and other faculty awards of the UGC has also increased in the past few years.

The University Grants Commission has also decided to relax the maximum age limit for women candidates for the award of research fellowships, teacher fellowships and research associateships. Atleast 30 per cent of such fellowships are awarded to women candidates.

To promote women's education, the Commission has taken various other measures. These include the increase in the UGC share for the construction of women's hostels from 50 per cent to 75 per cent, the share of college/state govt now reduced to 25 per cent and relaxation of condition for women's colleges becoming eligible for assistance, as a part of general development upto a ceiling of Rs. 4 lakhs with a student enrolment of 200 to 600 in the three-year degree course. The corresponding eligibility condition for other colleges is student enrolment of 300 to 600.

New Universities

Two new universities *viz*. Andhra Pradesh Open University (Hyderabad) and Shere-e-Kashmir University of Agricultural Sciences and Technology (Srinagar) were set up during 1982-83, thus raising the total number of universities in the country from 118 to 120. The University Grants Commission has also accepted "in principle" the establishment of a university in North Gujarat area, a technological university in Maharashtra, a university in Amravati in Maharashtra and a university in Arunachal Pradesh.

Three universities, namely, Manipur University, Manipur, Sri Krishnadevaraya University, Anantpur (AP) and Maharshi Dayanand University, Rohtak have been declared fit to receive Central assistance in accordance with the provisions of the UGC Act. Besides, the Tamil University at Thanjavur (TN) has also been declared fit to receive central assistance (other than for development).

Growth of Colleges

There were a total number of 5039 colleges in the country at the end of 1982-83, compared to 4886 in 1981-82 thus indicating that 153 new colleges were started during the one year period. The distribution of colleges according to courses of study during 1982-83 was—Arts, Science and Commerce colleges 3617, Technical/Professional colleges 522, Law 179, Physical Education and Education 377, Oriental Learning, 283 and Music/Fine Arts 61.

The number of such colleges during 1978-79 was 4460 and 579 new colleges were established till the end of 1982-83. The statewise break-up of these newly established colleges was, Karnataka 105, Bihar 113, Andhra Pradesh 84, Maharashtra 36, Orissa 35, Madhya Pradesh 37, Uttar Pradesh 33, West Bengal 26 and Rajasthan 26. These States taken together account for nearly 85 per cent of the total increase in the number of colleges.

Teaching Staff

During 1982-83, 2,11,751 teachers were in position (46,343 in the university departments and university colleges and 1,65,408 in affiliated colleges) which were 11,847 or about 6% more compared to the previous year (1,99,904) teachers. Out of 46,343 teachers in university departments and university colleges, in 1982-83, 4616 were professors, 10294 readers, 29,499 lecturers and 1934 tutors and demonstrators. The proportion of senior teachers *viz* professors and readers to the total teaching staff was thus 10% and 22.2% respectively and that of lecturers and tutors/demonstrators was 6.6% and 4.2%. In affiliated colleges, out of 1,65,408 teachers, 16436 (9.9%) were senior teachers, 1,41,211 (85.4%) lecturers and 7,761 (4.7%) tutors/demonstrators. ☐

Removal of Adult Illiteracy

Jan Mohammad*

> *"Human development is the sine quo non now of economic development and that education is not only a humane concern but also an excellent investment".*

The problem of adult illiteracy has assumed serious proportions in our country and in fact, year after year we have been adding to the number of our illiterates. According to 1981 census, the national average of literacy is 36.17% (excluding Assam) which means roughly that about two-thirds of our population is illiterate. It is very disheartening to note that out of 402 district in the country, 243 districts i.e. more than a half have literacy below the national average. The situation can be seen in its most poignant form in the Kashmir Valley where the average literacy is 21.39%, probably the lowest in the country with all the six districts having literacy much below the national average. Within the districts the percentage of literacy varies from district to district i.e. Kupwara 16.03%, Badgam 16.48%, Baramulla 19.53%, Pulwama, 19.98%, Anantnag 22.61% and Srinagar 33.71%. There is no doubt that literacy rate among women and backward section in the non-hilly areas of the valley is very low and in the case of Gujjars and Bakarwals in the hilly areas, it is the lowest.

It has to be fully realized that an illiterate person is a burden not only to himself but also to the society in which he lives. At every step, he encounters a certain disability which stifles the whole tenure of his life. He is dependent on and is exploited by others. An illiterate person cannot live a satisfactory and complete life and is usually a victim of disease, ignorance and poverty. His illiteracy is infectious and he passes it on to his family; he is, as it were, enveloped in darkness which does not allow him to see beyond the four walls of his home. His mental attitude to the affairs of life and the world about him is of total unconcern, as if the world did not exist. God in his benevolence and goodness has breathed something of his own spirit into man but it remains unexploited in the case of an illiterate person. In every religion, great emphasis is laid on understanding, and in the case of Islam, the exact word used is *'Tafakaroon'*. An illiterate person cannot understand the essence of his own religion although by usage he may memorize a few verses or perform a few rituals. He can never have a scientific attitude to life but will always be a victim of superstition and make-believe. He is not able to take advantage of the various developmental programmes and facilities which the government and other agencies offer to an individual. As pointed out by Pt. Jawaharlal Nehru "The country cannot make progress worth the name till we are able to remove illiteracy from among our masses".

It is imperative, therefore, that an elected government of a state should take all possible steps to make its people literate. Unfortunately the problem is not given the importance that it deserves. If a government feels that supplying rations to its citizens is important, laying roads or providing health care and hospitals is a must, the basic problems of making people literate cannot be less important, because, all other human activities are dependent on the quality of the people. Our production, our developmental projects, our health, our politics, and even our family life will show an overall improvement if our people become literate. Education is an individual's rights and it must be given to him early in his life, or later, if that has not been possible because of social backwardness. It will open new vistas to an individual, enable him to live a full life and make him a "complete man".

Our government is seized of the problem and they have done what they possibly could do, but, as was pointed out earlier, the problem is becoming more intractable year after year. Although the percentage of illiterates has come down after independence as is evident from the following census data, the number of illiterates has increased with an increase in the population. Literacy has been growing at less that one percent a year while the population has been increasing at over two percent each year:

Literacy Position

	1951	1961	1971	1981
Percentage illiteracy	81.7	71.7	65.5	58.3
Number of illiterates (in millions)	246.63	267.22	307.19	343.3

Our leaders in the past had a realization of the problem and they contributed their share for tackling this menace by expanding primary education and by organising a number of literacy drives and programmes. Later, "there was an attempt to move from mere literacy and to link it with development. This was to be carried out through social

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**Dean of Colleges, University of Kashmir.*

education—a part of the Community Development Programme. Adult Education however received low priority and was pursued on a modest scale".

Adult education and literacy was alse made a part of the Education System within the framework of Ministry of Education. The Central Government sponsored various schemes for the spread of adult education. The latest attempt in this respect was made by launching the programme of National Adult Education Programme (N.A.E.P.) on 2nd Oct., 1978 which coincided with the birth-day of Mahatma Gandhi.

The N.A.E.P. has three aspects—literacy, functionality and awareness. Literacy means enabling an adult illiterate to read, to write and giving him elementary ideas of numeracy. The objective of literacy could be achieved most effectively in the spoken language or mother-tongue of the adult. In Kashmir, however, this is being done in Urdu. Urdu is our official language and is used in lower courts, revenue departments and is the medium of instruction upto school level. But to use it as a vehicle of making an adult Kashmiri literate is, to say the least, illogical. It means loading an adult with the added burden of learning a new language. This poses a great difficulty to him, and the result is that he loses interest in the programme. And even if he does become literate with great effort, he soon gives up as he cannot use this language in his home or daily life. He relapses into illiteracy and the follow-up part of the scheme becomes infructuous. If the tribals in India are made literate in their own language, I can see no reason why Kashmiri should not be used to make Kasmiri's literate especially when the Kashmiri language has developed a great deal and is recognised as a regional language under the constitution. Besides proficiency in the pronunciation of the imposed language is difficult to achieve for a neo-literate and the result is an embarrassment not only for the instructor but also the person with whom the adult is conversing. Making an adult literate in the mother-tongue is natural and it would enable him to read, write and think on his own words other than those given in the instructional material and the follow-up process would be automatic. As the alphabets in the case of Kashmiri and Urdu scripts are identical, it would later on be much easier for an adult literate in Kashmiri to read and write Urdu. This approach needs to be appreciated by the authorities who are responsible for running the Adult Education Programme in Kashmir. Kashmiris admire and love the Urdu language and they have given to this language great names like Iqbal, Fauq and more recently poets, writers of fiction and critics. There is nothing chauvinistic or even regional in this method. It is quite natural. This method has also been adopted by other states and has been recommended by the educationists of the country. It is also necessary that Gujjars, Bakarwals and Ladakhis in the state should be made literate in their own spoken languages, which have developed to a marked extent in recent years.

Functionality means improving the skills and removing the drudgery in the job of an adult. It comes within the purview of Continuing Education and is essential for the purpose of accelerating national productivity and for giving better returns to an individual. It is important that resource material for this purpose be written by experts in a lucid and simple language so that the adult reader can benefit from its study. Our scientists and experts in various fields need to take stock on a regional basis of various vocations in which our people are engaged, give their deep thought to their problems and write small pamphlets and brochures suggesting ways and methods of improving the yield in agriculture and industry, introducing greater efficiency and removing drudgery in a job with introduction to the modern gadgets system in the emerging agro-technological society.

Functionality can be an effective method of motivating an adult to become literate. The instructor or worker in the field needs to give enough thought and time to the motivational aspect by narrating interesting stories and incidents to illiterate adults which may have helped an adult literate person to achieve financial gains or to save the life of an ailing member of his family, to achieve a better position in society for himself or his family and so on cultural programmes can be arranged, poets and writers can be asked to prepare material which can help motivate a person to become literate.

Awareness means making an individual conscious of his rights and responsibilities as a citizen of the country of giving him a feeling of his ancient culture and civilization, acquainting him with the problem of environment and education regarding cleanliness and basic hygiene, inculcating in him a scientific temper and thinking, motivating him to adopt small family norms etc. This purpose can be achieved more effectively with the help of mass media, audio-visual aids etc. But the medium should necessarily be the local language and should be based on the local environment and customs. It is necessary that the workers or instructors should themselves recieve proper orientation in all aspects of awareness on the basis of carefully chosen written material so that they can in turn pass it on to the adult learners. In terms of implementation these three aspects need generally to be taken on a sequential basis so that an individual is not loaded beyond his capacity and is able to attend to his daily chores also.

The N.A.E.P. Programme has remained confined largely to the first aspect namely, literacy. Even in this respect it has not been as effective as it should have been. This is largely due to lack of interest or proper leadership in some states, our elitist and bureaucratic approach to national problems, or natural calamities like drought, floods etc. In the case of functionality and awareness precious little has been achieved so far. It is not appreciated by many in our state that the programme of Adult Education has done much better in the southern states than in the northern ones which are comparatively more densely populated.

The N.A.E.P. was envisaged to be linked to the Development programmes. Unless a State Cabinet considers to tackle it that way and devises a positive, realistic and workable programme so that its impact can be felt in all developmental works and in all aspects of economic activities, nothing substantial can be achieved. The problem has to be solved on a war footing and each department, each organisation, private or public, has to be involved in the process. This was the kind of approach which was adopted in Indonesia in the early fifties. There, President Sokarno himself selected an area and made its people literate. Whereas in other states, voluntary organisations have done some laudable work in the field, in Kashmir such a feeling has not generated yet. Our Prime Minister has been repeatedly emphasising that such work can be very successfully undertaken by voluntary organisations Perhaps our Chief Minister has to take an initiative in this respect and call a meeting of all such organisations, place some reasonable funds at their disposal and motivate them to take up this challenging job. It would help a great deal if a voluntary organisation like "Abdullah Taileemi Muhim" is founded by the Chief Minister at each district level and is entrusted with the task of removing illiteracy. Such programmes should command public confidence and enjoy political support and encouragement. At the national level notable examples in this respect are Literacy House, Lucknow, The Bombay City Social Education Committee and Karnataka Adult Education Council. Besides, there is need to involve other ministries and departments in the scheme and place reasonable resources at the disposal of each for running the programme. It is encouraging that in Kashmir adult education has been linked with handicrafts training. A similar approach can be adopted vis-a-vis other developmental departments, factories, industrial concerns, cooperatives etc. The Municipalities and Panchayats can also play a similar role in running the programme for the backward sections of the Srinagar city and villages. This can also start public reading rooms in each Mohalla or rural area. It will help if due recognition is given by the Government for good work done in this sphere by any agency on the Republic Day or the Independence Day.

The teachers and students as envisaged in N.A.E.P. can do a lot but again in this respect, nothing much has been done by our schools, colleges and Universities. In J&K in particular their contribution has been very little when compared to other universities in the country. There is no doubt that our students do get busy with their daily attendance at school, home work, a little play and entertainment and it leaves them very little time during the academic session to attend to this important work. In recent years, the work load on school students has increased because of the introduction of N.C.E.R.T. syllabi. At the college level, the U.G.C. has under the scheme of Restructuring of Courses upgraded the Core Courses, recommended introduction of Foundation Courses and courses of applied nature. Besides, schemes like Continuous Assessment, Semester System, etc., have been introduced which keep the student tied down. But it is possible for the purpose of Extension work in colleges and Universities —a new dimension added to the Higher Education System —to introduce a Course on Community Development alongwith Foundation Course. For the field work for this course, the vacation periods can be utilized when the students will be obliged to visit selected areas on a planned basis and engage themselves intensively for the eradication of illiteracy. In this way, the programme will form a part of their curriculum and degree as has been done in some Universities in the South and there will be some accountability by asking teachers to supervise the work done. It is assumed that the students will receive proper training and orientation for running the programme successfuly. For this purpose the University Grants Commission has kept necessary funds at the disposal of each college and university. The instructions must be given in a manner so that the students show initiative and develop qualities of leadership in running this programme. Besides they need to be paid the honorarium under rules. It is hoped that by entrusting the job to the students, they will get a feeling of the social conditions of our people and at the same time earn a little money also. Such an education will give to our society a class of people who will serve the needs of the country in future and will be able to contribute their talent and experience to its development. The Universities and Colleges can, moreover, attend to and immediately take up three important aspects of the programme:

(i) preparation of Instructional material for the purpose of illiteracy, functionality and awareness;

(ii) a continuous programme of training of instructors both among the students and non-students;

(iii) monitoring, evaluation and research.

This can be taken up by the College and University teachers, in particular from the departments of Social Sciences and Education.

Women constitute half of our population and it is among them that the percentage of literacy is the lowest. The all India figure is 22% but it must be very low for Kashmir. Special efforts should therefore be made to make them literate and for this purpose women's institutions, schools, colleges and Home Science Colleges should be actively involved in the programme. Besides, unemployed educated women, in particular the local residents can be appointed instructors in large numbers to give due representation to women in the programme. In our State, women in the villages and hilly areas are encouraged to participate in the welfare schemes like poultry farming, epiculture, dairying, arts and crafts, village industries, etc. started in their own homes by offering them small loans for the purpose. It is necessary that these schemes should be popularised and linked with the adult literacy programmes as a package. Such a scheme will not only raise the status of the women in their homes but also provide motivation to the male members to become literate and also to educate their children. It will also contribute to the economic, social and cultural development of our villlages and towns. It is necessary that the content of the programme should relate to the life situations and day to day problems of women. Also, wherever possible, women workers and instructors should be selected locally and trained in relevant courses through the spoken language of the adults.

In the end it needs to be emphasised again that the problem cannot brook any delay considering the magnitude and the urgency of the task. In our rural areas where 80% of our population lives, people generally get engaged in their family occupations. They inherit skill and experience from their elders, these they jealously guard and do not share with others. In such a setting the need for literacy may not arise for them, and they may not appreciate the advantages of being literate. It is necessary therefore that the motivational aspect should be the initial and the main thrust of the programme. Adult Education must enable the adult to solve his day to day problems with confidence and decency. It may not be out of place to mention here that in India and China which were liberated in 1947 and 1949 respectively, the position of their literacy was not substantially different 30 years back—their percentage literacy was 16.67% and 20% respectively. Currently the position of literacy in the age group of 15-35 in India is about 51% while in the age group of 16-40 in China it is placed at 80%. This calls for a sincere and gigantic effort on our part also so that we can guarantee a better life for our people in the future. □

Seminar on Women and Crime

The Department of Social Work at Institute for Social Sciences and Research, Vellore organised a one-day seminar on "Women and Crime" with the objectives such as (1) the nature and pattern of crimes committed by women; (2) crimes against women; and (3) rehabilitation of women criminals, etc. recently. Representatives from Vellore Board Association, State Prison for Women, Community Health and Development Hospital of C.M.C., After Care Home for Women, Voorhees College, Banks, M.B.K. Pannai and Institute for Social Sciences and Research participated in the seminar. While welcoming the gathering Prof. S.C. Mathivaanan, Director, Institute for Social Sciences and Research said "Definitely not due to heredity but environment has focussed her into a new light, that radiates her weakness, X-rays her conflicts. These X-rays and radiation direct us towards the malady that had encircled her and had made her not only the victim of crimes but had instigated a few to commit crimes". Mr. P. Gomathinayagam, in his inaugural address pointed out the case histories of women criminals. According to him, poverty is the reason for few cases and there are several reasons for women committing crimes. Prof. (Miss) Vasanthakumari, Principal, D.K.M. College, Vellore stressed the need for increased status of women and she wanted that the women should volunteer to participate in social affairs.

Mr. K.D. Sikka, Reader, Department of Criminology and Correctional Administration, Tata Institute of Social Sciences, Bombay, in his keynote address pointed out the need for independent women jails in all the states. He added that most of the inmates of the prisons are mothers and they needed teaching in house management and child care. The paper contributed by Mr. V.R. Krishna Iyer (Former Judge, Supreme Court of India) stated that when women is the victim of a crime, the equality of the law be comes a dead letter. But law is, as it is, against women. Justice in the field of crime against women can become effective only if there is a revolutionary restructuring of corpus juris, including penal law and evidence Act. A female chapter of Victimology deserves to be developed as part of the culture of gender justice. Mr. Pon Paramaguru, IPS, Director Gentral of Police cited in his paper "Women are the most able criminals as biologically and socially they are well equipped for lying, deceiving and trickery" & contended that the low rates of female criminality are misleading as they are more capable than men in concealing their crimes. Dr. J. Visuvathas Jeyasingh, Professor and Head, Department of Social Work, Institute for Social Sciences and Research, Vellore in his paper on 'Children in Prostitution' pointed out that children were used as prostitutes. Such children should be taken care of by either voluntary organisations or government in order to save them from social and moral dangers.

The following recommendations were made in the seminar: (1) There is need for intensive medical care for women prisoners, hence the present health care service should be restructured in Indian Prisons. (2) Free legal aid service centre should be specially devoted to help women in distress while they are confronted or victimised by crime and criminal. (3) Family courts should be organised in all over India to deal with women problems. (4) There is a need for attempt to identify the child prostitutes in red light areas of our cities to save them from the criminal pool. (5) Police should take adequate care in arresting the children, while arresting them under SIT Act they should function as saviour to rehabilitate the children under abuse. (6) Sex education should be introduced for boys and girls at higher secondary schools. (7) Parents and teachers should refer uncontrollable children to social workers or psychologists or psychiatrists. □

Prof. Mathur Addresses Convocation of Avadh University

Excerpts from the convocation address delivered by Prof. M.V. Mathur, former Director of National Staff College for Educational Planners and Administrators, at the Avadh University, Faizabad, on March 3, 1984.

“..In our political framework we have given to our-self a Parliamentary Democracy with a Central-State set up. I personally regard parliamentary democracy as the best form of Government, and by the same token, it is one of the most difficult forms of the Government demanding a great deal of discipline and dedication. Great Britain is regarded as the home of Parliamentary Democracy and it is supposed to have been born when Magna Carta was signed in the 13th century. And yet even at the dawn of the 20th century, Great Britain had as its monarch, Queen Victoria, who could ‘make’ and ‘unmake’ Priminister House of Commons could be over-ruled by the House of Lords, women had no voting rights. Thus even for Great Britain the full flowering of Parliamentary Democracy is a 20th century product though it had its origin almost seven-centuries ago. In India we adopted the fully developed model of British Parliamentary Democracy right away and, infact, went a step further by having not just a Central Government but also, very wisely, a number of State Governments with their own constitutional rights and responsibilities.

“On the economic front we preferred to follow the path of planned development—something which had not been practised under British Parliamentary Democracy but was a special feature of the Socialist governments of USSR and Eastern Europe. Perhaps this was necessary so that we could quickly bridge the gulf between the developed parts of the western world and our own. During the 19th century and the first half of the present century India had lost the opportunity of adopting or adapting the new processes generated by the Industrial Revolution of the late 18th century as we had ceased to be masters of our own destiny. Independent India provided to us an opportunity to undo this damage. However in this sphere also we went a step further compared to the Soviet Union and the socialist states of eastern Europe. In the planned development of those countries there was no room for the private sector. In our case we decided to bring about planned economic growth with prosperous co-existence of public and private sectors. In fact, private sector in India never had it so good as since indepedent while, undoubtedly, the public sector has expanded a great deal under our successives five year plans.

“The combination of a multi party parliamentary democracy with a central state relationship and a process of planned growth with private and public sectors is a unique combination and makes our task doubly difficult. Not only this, rapid economic development necessitates in our set up elimination of various vested interests and functionless intermedaries so that the producers of national wealth specialy in the field of agriculture, are able to have direct interest and ownership of the means of production and the lands they cultivates. This requires basic institutional changes. Our juristic process however are such that these reforms have witnessed numerous challenges from vested interests in various courts and a great deal of delay has occurred effective implementation of basic institutional changes. Also, the freedom of individuals and the freedom of association, though very desirable in themselves, sometime lead to certain aberrations. Witness for example, in sevral of our public sector concerns not one trade union (as it would be in U.S.A. or in USSR) but several trade unions vying with each other in putting forward their demands leading to a good deal of avoidable conflicts and loss of productions.

“On the cultural front, while we are inheritors of a great civilisation thus making even our ‘illiterate’ persons are reasonably ‘well educated’, and while as individuals we may successfully compete with all others, as members of a team we flunk. We have yet to rise above petty, jealousies, casteism and regionalism and enthuse our people to work together and respond in a disciplined and dedicated fashion’ to the challenges that emerges from our well chosen politico economic set up. It is difficult to find another example in the history of the world or anywhere else in the comity of contemporary developing nations our kind of a unique set up. Its very idealism acts as a brake on our accelerated growth. Of course, we have significant achievements to our credit in various walks of life. On the political front we have provided to the world the very first example through regular ballot box of central and state governments of a rainbow of political colours and coalitions from the extreme left to the extreme right. Howsoever much we may dislike it as members of a particular political party, as citizen of India we should be very proud of of the co-existence of freely elected governments of several political......and colours. On the industrial and agricultural front also our record is no less creditable. In the fields of heavy and engineering industries, power generation, irrigation, transport, etc., we have compressed in less than four decades something which could not be achieved earlier even in 150 years. Our green revolution has also become an object lesson to the rest of the developing world. And yet so much more remains to be done. It is towards this end that graduates of the year will have to devote their attention.

"We are on the thresh-hold of the formulation of our Seventh Five Year Plan. Successive five year plans have contributed a great deal in creating numerous and significant assets in various sectors of development and in providing relevant infra-structural facilities. We, however find that as yet we have not succeeded in optimally utilizing the assets that we have created and therefore, the benefit expected from our plan programmes, have not been fully derived. It is, therefore, necessary on our part at this juncture to examine the steps that could be taken to make our planning and development processes more effective.

"Our planning process is supposed to be 'partial', as we have yet to devise a mechanism of a system of investment planning not only in the public sector, as is the practice at present, but also in the private sector. As this total planning approach is not available, there are possibilities of slippages and distortions in our plan programmes. A suggestion has already been made that an effort should be made during Seventh Five-Year Plan to enlarge the area of effective planning, by covering investments in both the pubiic and private sectors.

"Our planning process is regarded as 'part-time' because we focus our attention on certain programmes of planned development for a period of five years and at the end of this period relegate these very programmes to the category of 'nonplan sector'. And, while we pay a great deal of attention and while these activities are in the 'plan' sector, they get neglected when they become 'nonplan'. In a field like education, over 90% of our total activity is in the nonplan sector and only less than 10% under the plans. What we really need is an over-all look on developmental activity whether plan or non plan. Of course, one can appreciate certain schemes of financial support on the part of the Central Government for a limited period of five years but it is very necessary at the level of our state governments to ensure that the nonplan development sector continues to receive appropriate attention. In fact, each state government should have a well-manned Planning and Development Commission consisting both of 'political technocrats' (i.e. persons like the Chief Minister, the Finance Minister and the Planning Minister), and sectoral technorats (like distinguished Engineers, Economists, Management experts etc.). Such a body should be responsible for formulation, revision, overseeing effective implementation, and, drawing lessons from well designed evaluations of states total developmental activity.

"Our planning process is termed 'para-professional' because as yet in our various states it has not been possible to develop cadres of real good professionals who devote a great deal of their time and attention in various sectors of developmental activity. It would be desirable if in each of organised Services—general as well as technical—we identify and specially groom selected persons for this important task. Even in the old I.C.S. a 'finance and commerce pool' was developed and some of the members of that pool, though formally retired, are still engaged in nationally important tasks. Hence the urgent need for developing effective planning expertise. Of course, in the National Planning Commission over a period of time satisfactory professionalism has emerged in certain sectors of development but very little has yet been done in this direction at state levels.

"Even the recent mid-term apraisal of the Sixth Five Year Plan highlights some of our chronic deficiencies in spite of our now possessing three decades of experience in planned development. As yet our database is not strong enough. In fact when in the olden days collection of land revenue was regarded as a major activity, periodical land surveys and settlements were undertaken to classify land into different categories etc., for collection of land revenue with a view to generating relevant data regarding our natural and human endowments. For potential development will it not be desirable to conduct in each and every village at least once in ten years a survey of the natural endowments of the village and its possible utilisation on the basis of relevant technology as also a survey of every family about available human expertise and potentialities of its growth.

"Given an effective state level planning and development machinery, it should be possible for us to develop within a state regional/divisional, districts-level and block level machinery for effective planning. It so happens that our country has, apart from its universities and university-level institutions, about five thousands colleges and we also have about five thousand development blocks. It would therefore, be highly desirable to develop appropriate linkages between our universities and colleges, and developmental activities in our districts and blocks. I have every hope that in the formulation of our Seventh Five Year Plan ideas for making our planning and development processes more effective will attract a great deal of attention.

"Those of you who are leaving the portals of your respective colleges and joining the 'School of Life' will have to discharge very significant responsibilities in upholding our basic national objectives of democracy, secularism and socialism, While democracy permits dissent, an educated person practices it in a thoughtful and disciplined manner.

"In fact, such an understanding could be effectively promoted by our educational institutions if they could bring together leaders of various religious thoughts on a common platform to discuss different aspects of our life and conduct. The objective of a socialistic society can be given a big boost by undertaking all possible measures to promote justice —social, economic and political. Graduates of our universities belong to highly select group who have been supported by the nation in acquiring higher education..." □

Need for an Open University Stressed

Dr. Bakshish Singh, Director of Correspondence Courses of Punjabi University made a strong plea for establishing a national institute or an open university in the country with a view to strengthening the innovative system of distance education.

Presenting his paper in the two-day national seminar on "Correspondence Education" organised by the Himachal Pradesh University, Dr. Singh said that unless some central organisation like a national institute of correspondence education or an open university was established, distance education would remain subservient to the traditional system and not grow beyond that.

Dr. Bakshish Singh said that the national open university would ensure extension of opportunity for higher education, diversifying education and bringing about qualitative improvement in distance education. It would carry out a systematic survey of the educational needs, both formal and vocational, of different regions, the job potential of various types of courses, the need for refresher and updating courses, for people engaged in different vocations and devise ways and means to meet these requirements.

He further said that since correspondence courses, continuing education and adult education were similar in nature so far as the clientele and instructional methodology were concerned, these could be clubbed together and brought under the umbrella of the proposed central institute. Dr. Bakshish Singh made it clear that like any other autonomous university, the proposed central open university would also draw grants from the University Grants Commission. He was of the view that the proposed central agency should be an independent body comprising a few educationists who had an insight into the working of correspondence courses. It should be an apex funding body like the UGC. It should ensure coordination among various institutions of correspondence education in the country. Distance education, according to him, had to face crises of identity, respectability and legitimacy in the country. The proposed central agency could be the only way out, he said.

Dr. S.P. Anand of the Panjab University stressed that the degrees granted by the institutes of correspondence courses should have credibility for the job givers. These degrees may not have the seal of correspondence courses for that matter, he said.

In his paper on 'Financial dynamics of distance education with reference to autonomy and a central agency" Dr. S.K. Gupta of Himachal Pradesh University stressed the need for financial and academic autonomy to the Directorates of Correspondence Courses within respective universities. The Government and the UGC must take up on themselves to finance these directorates in a more appropriate manner to make their functioning more meaningful. In his paper on 'Restructuring correspondence courses'. Dr. Jaidev of Himachal Pradesh University pointed out in a poetic language that the system of correspondence education in our country suffered from structural, and local types of weaknesses for which the proposed central agency only could perhaps provide an effective remedy.

II National Consultation on Rural Development, Employment Generation and Alleviation of Poverty at GV

The Second National Consultation on "Rural Development, Employment Generation and Alleviation of Poverty" was organised at the rural campus of the Gujarat Vidyapith under the auspices of ILO and Textile Labour Association of Ahmedabad. The Gujarat Vidyapith also cooperated in this important ILO Consultation. Over 40 leaders belonging various trade unions including to INTUC—National Labour Organisation—and several rural development voluntary agencies participated in the Consultation which was held from 3rd to 5th April 1984 in the village Randheja (Dist. Gandhinagar) where Vidyapith has a rural campus with Krishi Vigyan Kendra (Agricultural Science Extn. Centre) and Home Science College for Rural Women.

Mr. S.K. Jain, Deputy Director General of ILO came specially to attend this consultation. It was chaired by Shri Kanti Mehta, Vice-President of the INTUC. Shri Naval Tata represented the Employers' Federation. Prof. Ramlal Parikh, Vice-Chancellor of the Gujarat Vidyapith; Dr. Rajendra Devdas, Director of Avinash Lingam Home Science College of Coimbatore; Mr. Malhotra representing UNDP; and Mr. Lugo representing UNICEF; participated in this consultition, apart from Mr. Rehman of Bangladesh and Mr. Unni Nair and Mr. Khan from ILO Regional Office at Bangkok.

The voluntary agencies included, among others, Nagaland Gandhi Ashram, Agricultural Tool Research at Bardoli, Banvasi Seva Sangh at Mirazapur, SEWA at Ahmedabad, Lok Shiksha Parishad of Ramakrishna Mission at Calcutta, Environmental Protection Committee of Pandit Sundarlal Bahuguna of CHIPCO Movement, etc. Mahatma Gandhi Institute of Labour Studies set up in Ahmedabad also participated.

The three-day consultation was warmly welcomed by Vice-Chancellor Prof. Ramlal Parikh at the Gujarat Vidyapith in a congregation meeting. Prof. Parikh stated that it was high time that trade unions, voluntary agencies and higher education institutes came together to accelerate rural development through voluntary efforts of the people. This would be possible only if the universities devoted substantial part of their time for development of villages as part of the curricula. He explained how Gujarat Vidyapith provided nearly 25 to 35% of the time for field work and extension work in villages in every curricula on higher education. Mr. Jain, Deputy Director-General of ILO, particularly stressed the need for more micro-research than endless macro-level discussions.

The veteran colleague of Mahatma Gandhi, Shri Shankerlal Banker, attended the opening session despite his 96 years age.

The consultation laid great stress on participatory research with the rural poor particularly rural women. The ILO Deputy Director General appreciated the role Vidyapith is playing in training rural service graduates. The Krishi Vigyan Kendra of the Gujarat Vidyapith organised field demonstration of marginal farmers and agricultural workers for training them in cross-breeding of Kankrej Jersey cows, sprinkler of irrigation, improvement of agricultural tools, biogas and solar cooker as well as low-lift for collecting water from irrigation canals.

Megalithic rock paintings discovered

An interesting group of ancient paintings and rock bruisings in a huge rock shelter has been discovered at Chennarayanpalli near Gudiyatham in North Arcot district by the students and staff of the Department of Ancient History and Archaeology, University of Madras, led by Dr. S. Gurumurthy and Dr P. Shanmugam under the direction of Prof. K.V. Raman.

The painting which are found on the ceiling and wall of a huge cave seem to depict a long hunting or battle scene. A row of horses with mounted riders is seen depicted amidst a number of fighters or hunters brandishings swords and daggers. A few are seen escorting the horses. Generally the body of the horse is painted with square or rectangular profile. There are also a number of totemic symbols drawn in white line, depicting concentric squares and criss-cross lines. Such totemic symbols and paintings having various magical and fertility significance have been reported from many other parts of India. These paintings can be ascribed to the Megalithic period when iron and horse became popular in South India. Exploration in the surrounding areas revealed the remains of the pottery ascribed to the Megalithic period which was an important iron age culture of South India, besides a stone celt.

It may be recalled that a rock shelter with similar paintings of horsemen was discovered by the Department in 1980 at Mallapadi near Bargur in the same district. The Department has been engaged in systematic archaeological exploration of the distrsct followed by excavation of selected sites.

Gujarat Vidyapith launches adult literacy centres

The Centre for Adult & Continuing Education and Extension Work of the Gujarat Vidyapith has launched 160 literacy centres in the areas like innermost tribal areas of Dharampur in South Gujarat by adopting eleven tribal villages and in 18 villages adopted for this work in its rural campus in Gandhinagar District in North Gujarat. Three training courses of one week each were conducted for 92 Instructors and 15 Supervisors. The stress laid in all the training programmes was on literacy as a part of total community education. 50 hours of well-designed programmes in each course included 4 hours of field survey of literacy needs, 4 hours of preparation of non-verbal teaching aids, three hours of demonstration lessons, 5 hours of group-work and 20 hours of lectures on all aspects on adult education.

The Gujarat Vidyapith also runs the State Resource Centre which has produced 4 different primers for Women, Labour, Tribals and general. One of these primers got a National Award of the Directorate of Adult Education, Government of India. The Vice-Chancellor of the Gujarat Vidyapith, Prof. Ramlal Parikh, is the Chairman of the Advisory Committee of this programme. He addressed most of these courses and pleaded for community involvement in every literacy and educational programme. Mr. P. K. Patnaik, Joint Secretary of the Union Ministry of Education, who is directing the Adult Literacy Programmes, visited the Gujarat Vidyapith and saw the actual work of how learning material is prepared and tested. He expressed his happiness for these efforts of the Gujarat Vidyapith

Medical college to function from the academic year 1985-86

The medical college planned by the Annamalai University is expected to start functioning from the academic year 1985-86. A committee that has been constituted for this purpose will work out the details of the project. Besides the Vice-Chancellor Prof. S. V. Chittibabu, the committee includes Dr. M. Natarajan, Dean, Madras Medical College, Madras, Dr. Lalitha Kameswaran, Director of Medical Education, Govt. of Tamil Nadu, Madras, Dr. S. Gnanadesigan, formerly Director of Medical Education, Madras, Dr. M. Venugopal Director of Medical Services, Madras, Dr. A. Venugopal, formerly Syndicate Member, Madras University, Madras, Dr. B. Ramamurthi, Neuro Surgeon and formerly, Principal, Madras Medical College, Madras, Dr. S. Madanagopal, Professor of Gastroentrology, Madras Medical College, and Dr. B. Srinivasan, Principal, Rajah Muthiah Dental College, Annamalai University.

Jammu sets up Examination Reforms Unit

The University of Jammu has set up an Examination Reforms Unit with a view to bringing improvements in the examination system on the lines proposed by the University Grants Commission. The Unit is being financed on 100% basis by the UGC. The Controller of Examination is the administrative head. The services of Dr. D. K. Jain, Research Officer, State Institute of Education Jammu, have been obtained to coordinate the activities of the Unit. Dr. H. R. Sharma has been appointed as Statistician, in the Unit. The first meeting of the programme advisory body of the Unit was held on 30th of January, 1984 under the Chairmanship of Vice-Chancellor.

The Unit has taken up "The analysis and restructuring of syllabi at under-graduate level, particularly in respect of the subjects included in the Faculty of Social Sciences." The report of the project is expected shortly.

Rush for admission into Open University in Andhra Pradesh

Prof. G. Ram Reddy, Vice-Chancellor of the Open University in Andhra Pradesh speaking to reporters at New Delhi recently said that there was a record number of 33,000 applicants for registration for the undergraduate classes of the AP Open University. Those seeking registration were not merely from within Andhra Pradesh but were also from all over the country.

He indicated that the university may consider opening centres even outside Andhra Pradesh in case there were more than a thousand students forthcoming for such a centre. Last year the university had opened 28 study centres all over Andhra Pradesh—one study centre in each district and six in Hyderabad and Secundrabad to cater to the 65,000 students who were admitted.

Admissions to the Open University are made on the basis of an admission test held for the purpose. The purpose of the test, according to the Vice-Chancellor, was to measure to educational level of the students and to see whether those enrolled can follow the lessons sent by the university.

The university at present offers facilities for the BA, BCom and BSc degree courses. Proposals are under examination for conducting professional courses also.

Forestry research council under study

Union Minister for Agriculture, Rao Birendra Singh said in Lok Sabha recently that the Central Government was thinking of setting up an Indian Council of Forestry on the lines of the Indian Council of Agricultural Research.

He also revealed that the question of converting the Forest Research Institute, Dehra Dun into a deemed university has been sent to the Education Ministry and the UGC for appropriate action.

Telugu University inaugurated

Telugu Vignana Peetham (Telgu University) was inaugurated by the former President of India, Mr, Neelam Sanjiva Reddy, on April 2, 1984. In his speech he expressed concern at the watering down of the 3-language formula and called for rigorous steps particularly by non-Hindi States to ensure effective implementation of the 3-language formula.

The Chief Minister of Andhra Pradesh, Mr. N.T. Rama Rao, who presided over the inaugural function said that the university aimed at preserving Telugu culture and language.

Medical college proposed for Nasik

According to reports, the Maratha Vidya Prasarak Samaj, resolved recently to set up a medical college in Nasik on a 90-acre plot owned by the Samaj. The college is likely to begin functioning from the next academic session. A delegation is likely to meet the Chief Minister of Maharashtra in this behalf. Generous donations from various cooperative sugar mills, zila parishads, etc. have been offered for the setting up of the college.

Bharathi's works to be published by Tamil University

The complete works of poet Subramania Bharathi are proposed to be published by the Tamil University at Thanjevur. The complete works will cover five deluxe volumes and the first volume is likely to be in the market by the end of July. The State Government of Tamil Nadu has already advanced Rs. 3 lakhs to the University for this project.

A separate poet Bharathi corner is proposed to be opened in the University.

PG correspondence course in Urdu

Mysore University will soon have a postal postgraduate course in Urdu. This decision was taken at a meeting of the University Syndicate recently.

Seminar on EIIL

A UGC sponsored three-day seminar on English as an International Language and its implications for the teaching of English in India was held under the joint auspices of the Department of Educationand the English Language Teachers Association of India from 12-3-'84 to 14-3-'84.

Dr. N.S. Prabhu, British Council Division, Madras, delivered the Key-note address. Six papers were presented on the implications of the EIIL approach as distinct from the EFL and ESL approaches in the Seminar.

Teachers of English language from University Departments, Arts and Science Colleges, Technical Education and High and Higher Secondary Schools participated in the Seminar.

The main objective of the Seminar was to expose the teachers of English language to the new approach to the use and the teaching of English to non-native countries.

PANJAB UNIVERSITY
CHANDIGARH

Corrigendum to Advertisement No. 4/84

The post of Professor (Experimental Nuclear Physics) be read as Professor of Physics.

News from Agril. Varsities

Seed technology laboratories at PAU

Dr. Sukhdev Singh, Vice-Chancellor of the Punjab Agricultural University while inaugurating the Seed Technology Research Laboratories at Ludhiana, said that seed was the most important input in agriculture and high yields of crops could only be obtained if the farmers sowed pure, high yielding and disease free seeds. He further said that the University had the basic responsibility of producing and supplying of breeder seed to the seed corporations for further multiplication, testing its germination, packing, labelling and selling it to the farmers. The Vice-Chancellor emphasised that apart from wheat and rice due attention should be given to producing quality seeds of vegetables and flowers which were in great demand.

Dr. A.S. Khera, Head, Department of Plant Breeding said that the laboratories had come up at a cost of Rs. 11.2 lakh which had been financed by the Indian Council of Agricultural Research under World Bank Project.

New method in nursery management developed at Annamalai

"Annamalai Straw Rope Nursery" is a new concept in nursery management evolved at the Annamalai University Experimental Farm. It is a simple and cheap technique, ideal for crops that are sensitive to naked root transplantation; it ensures an excellent stand of the crop as the root system is disturbed to a minimum while planting in the main field. This method is found to be ideally suited for cotton and maize. Explaining the process, Prof A.R. Lakshmanan, Dean, Faculty of Agriculture, says "Straw-twist ropes soaked in a slurry of sand, clay and farmyard manure (1:2:2 ratio) for 24 hours are spread over a sand bed of 6 cm height and covered with a thin layer of sand over which seeds are sown 10cm apart. When the germination is over in 4 days time the seedlings are found to have excellent vigour. The roots get embedded in the straw rope itself and the rope is cut into pieces to separate the seedlings with root system intact. 10 days seedlings are transplanted in pits with a spacing of 60cmx20cm. The pits are filled with a slurry consisting of sand, farmyard manure or compost which fixes the seedlings firmly without any air pocket. The seedlings are pot-watered for 10 to 15 days and when all the seedlings are well-established, the flood irrigation is done. Advantage in this system is that no preparatory or inter-cultivation is necessary as the transplanted maize has an early and a faster ground coverage which suppresses the weed growth."

HAU intensifies research on gram disease

Haryana Agricultural University (HAU) has initiated an extensive research programme on the ascochyta blight disease of gram. This was disclosed by Dr. B.L. Jalali Senior Plant Pathologist at Hissar. He said that for the last several years the gram crop in Haryana has been getting severely affected by various gram diseases, particularly the ascochyta blight which has taken a very heavy toll of the gram crop in the major gram growing areas of the State.

In view of the magnitude of this gram crop menane plant pathologists of H.A.U. have initiated a programme of intensive studies on screening a large spec-

CALENDAR OF EVENTS

Proposed dates of the Event	Title of the Conference/Seminar/ Symposium/Workshop	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks
June 4-23, 1984	ICAR sponsored Summer Institute on Recent Advances in Arid Horticulture	Divn. of Plant Studies. CAZRI, Jodhpur	Dr. H.C. Das, Head	—
June 5-28, 1984	ICAR sponsored Summer Institute on Energy Management in Agri. & Rural Sector Sources & Technologies	C.I.A.E, Bhopal	Dr. R.C. Maheshwari Head, Electro Mechanical Engg Divn.	—
June 4-23, 1984	ICAR sponsored Summer Institute on Principles & Concepts of Apple Scab Disease Management	H.P.K.V.V., Solan.	Dr. R.K. Agarwala, Prof. & Head	—
June 8-28, 1984	ICAR sponsored Summer Institute on Recent Research in Child Development—Implication for curriculum change.	Lady Irwin College & New Delhi.	Dr. S. Anandalakshmy. Director	
June 12-July 6, 1984	ICAR sponsored Summer Institute on Plant Response to Stress & Screening Methodology for salt resistance	Division of Genetics Plant Physiology, CSSRI, Karnal.	Dr. R.S. Rana. Sr. Scientist	

trum of promising genotypes for resistance to this disease. An Ascochyta Blight Nursery has been developed with the primary objective to evaluate inbuilt resistance to different cultivars.

More than 800 different genotypes are being currently screened after they had been subjected to artificial disease-strees conditions.

These test materials have been drawn from diverse sources, including materials from HAU, ICRISAT, All India Coordinated Pulse Improvement Programme etc. Genotypes possessing a fair degree of resistance under such conditions would consequently be employed for resistance breeding programme.

Pathology department in vety. college at KAU to be upgraded

The Kerala Agricultural University has decided to upgrade the Department of Pathology under the College of Veterinary and Animal Sciences, Mannuthy to a Centre of excellence and extend the diagnostic services of the University to the entire State through the proposed regional centres with modern facilities, one in the north and the other in the south.

The Centre of excellence will have separate fulfledged units for disease investigation, mycotoxicosis, clinical pathology, comparative oncology, avian pathology, experimental and molecular pathology and for the study of the effects of environmental pollutants on animals and birds.

The Department of Pathology is the only centre in the State to day to diagnose rabies infection in dogs in a scientific way, which is necessary for treatment of humans and animals bitten by rabied dogs. This facility will be extended to the two regional centres proposed to be started soon.

The Department which was started in 1959 has some notable achievements in the areas of control of duck diseases, contamination of animal feeds and hypothyroidism in goats. The haemorrhagic diathesis disease in poultry has also been brought under control following research here.

The effect of aflatoxin from feed stuffs on the growth and production was also studied and the residual toxicity reaching human beings through milk and eggs was identified. Contaminated groundnut cake, it was found, caused high mortality and lower growth rate in pigs and such feeds are now not being used in piggeries.

HAU veterinary clinics

Haryana Agricultural University's Veterinary Clinics which are the best animal treatment centres of the country, successfully treated 18404 animals of different species suffering from differen diseases, during the year. This was disclosed recently by Dr. L.D. Dhingra, Dean of the College of Veterinary Sciences.

The range of animals treated at the clinics was also very wide. Among them were large animals like elephants, buffaloes and camels as well as smaller ones like pet dogs, cats, deer etc. Dr. Dhingra disclosed that normally very complicated cases were brought to the clinics for treatment. The farmer first tries to cure the animal himself, then goes to the village quack, then to the field doctor and finally comes to HAU when the ailment is normally in its last stage.

Besides providing treatment to animals at the clinics, the College, under its extension activities, also runs five ambulatory centres in five nearby villages which are visited regularly by the senior students and faculty members. The College also organised 20 clinical camps in different villages of Haryana.

New variety of mango

The Plant Breeding Department of the Institute of Agricultural Sciences of BHU, it is reported, has developed a new variety of mango which is capable of yielding fruits of up to 800 a year within two years of its planting. The height of the plant also does not exceed 8 feet, it is reported.

News from UGC

Hari Om Ashram Trust Awards (Science & Society) for the year 1982 and 1983

The University Grants Commission has instituted an award in the field of 'Interaction between Science and Society' of the value of Rs. 10,000/- to be given away every year from 1975 onwards to outstanding Scientists/Social Scientists out of the endowment created with fund received from Hari Om Ashram Trust, Nadiad (Gujarat).

Selection will be made from among eminent Scientists/Social Scientists/Technologists who have made significant contribution towards development of scientific culture and temper as an integral part of fabric of social structure through analysis of factors responsible for promotion of scientific and technological development and initiation of appropriate processes of change through active participation, development of scientific policies and their implementation and the beneficial results accruing therefrom.

The award is also subject to the following conditions:

(i) Only contributions by Indian Scientists/Social Scientists individual or by a team of 2 to 3 persons would be eligible for this award. The institutions or organisations are not covered under the scheme.

(ii) The prize would be awarded to an individual or a team for outstanding contributions to the development of interaction between science (including Technology) and

Society and which has made conspicuously important contribution to the development of Indian Society.

(iii) In deciding the award attention would be focussed on the specific contributions made during the last five to seven years period.

(iv) The work to be assessed would cover books, monographs, papers or any other published account of research work, inventions, discoveries etc., which have not already received a similar award from any other agency.

(v) The work would have been carried out in India.

Nominations are invited from the Universities, Research Institutions/Organisations, Professional Societies and National Organisations connected with the above fields. The names of the suitable persons, alongwith their bio-data may be sent to the Commission. The persons recommended in the preliminary selection will be required to supply the requisite documents in support of their work. The final selection will be made on the recommendation of a jury to be appointed by the Commission.

The nominations may be sent to the Secretary, University Grants Commission by 15th May, 1984.

Experimental television programmes on higher education through INSAT-IB

The University Grants Commission, with a view to facilitate viewing of Higher Educational Programmes on Television during experimental mode through INSAT-IB, has selected initially about 100 colleges, which are within the transmission range of existing Doordarshan Kendras, in six states, namely, Maharashtra, Uttar Pradesh, Gujarat, Madhya Pradesh, Rajasthan and Andhra Pradesh.

The University Grants Commission which has been allotted one hour transmission time for television programmes on higher education through INSAT-1B has set up four Educational Media Research Centres at Jamia Millia, New Delhi, Pune & Gujarat Universities and Central Institute of English and Foreign Languages, Hyderabad and two Audio-visual Research Centres at Osmania and Roorkee Universities for the production of programmes on higher education. The experimental programmes are likely to start shortly. Since educational information on viewing conditions in broadcasting mode is to be collected, it was felt desirable to have a close liaison between the Educational Media Research Centres (EMRC) and the selected colleges. The Commission has asked each of the selected colleges to buy one colour TV set on 50 percent sharing basis, UGC share being limited to Rs. 3500, out of the equipment grant under general development assistance received from the UGC. The responsibility for maintaining the TV set would be that of the college. These colleges have also been asked to allot one class room for viewing and to assign one teacher to undertake responsibility for making the arrangements for viewing.

The Commission also intends to pre-test some of the Higher Educational TV programmes in some colleges. The pre-testing would essentially be for guiding the selection of prepared programmes and also to some extent to help the EMRC Producers by getting a feedback on their programmes. With this end in view, 4 colleges in each of the above six states will be selected for pre-testing purposes.

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Sports News

NAM sports seminar

NIS Organised an International Sports Seminar of the Non-Aligned Movement countries from 3rd to 14th April, 1984 at the Institute's Campus at Patiala. The seminar was inaugurated on 3rd April, 1984 by Mr. A. A. Raheem, Minister of State in the Ministry of External Affairs. In his inaugural address, he expressed the hope that the seminar would provide a platform of mutual cooperation and understanding between the non-aligned countries through the media of sports. The inaugural session of the seminar was presided over by Mr. Vidya Charan Shukla M.P., President of the All India Council of Sports. In his presidential address he emphasised the need for the non-aligned countries to work together for the promotion of sports. The seminar was attended by the delegates from about 25 non-aligned countries.

The seminar was organised in pursuance of a decision taken at the inaugural conference of Physical Education and Sports of the NAM and other developing countries held in Libya in August 1981. The 1st ever seminar on Sports between the NAM Countries by India is a step in the right direction because India is currently holding the Chairmanship of the non-aligned movement.

The Seminar was divided into two parts :

Part I—General Subjects: Under this head the following general subjects were discussed:

(i) Olympic Movement and sports development in NAM countries; (ii) Olympic Solidarity : aims and objectives; (iii) Planning of sports facilities; (iv) Organisation of International Competitions; (v) Sports Medicine; (vi) Sports Training; (vii) Sports Biomechanics; (viii) Sports Psychology.

Eminent personalities in the field of sports delivered lectures on these subjects which mainly focussed attention on the organisational, administrative and financial aspects of sports events.

Part II: This part dealt with the following selected sports disciplines :

(i) Athletics (ii) Basketball (iii) Football (iv) Gymnastics (v) Hockey (vi) Volleyball.

Each delegate could pick up any one of these disciplines. They were imparted the techniques of advanced coaching in the respective sports disciplines. Besides, the delegates discussed subjects of common interest and ways and means of improving sports in the NAM countries.

10,000 athletes for Los Angeles

About 10,000 participatns are expected at the 1984 Los Angeles Olympics where apart from 22 disciplines in the competitive section, two demonstration sports—baseball and tennis—will also be played.

At present there are 150 countries members of the International Olympic Committee and majority of them are expected to participate.

This leaps beyond the first modern Olympics that took place at Athens in 1896 where there were 42 contest bouts in 10 sports with 13 nations participating. The total participants were 285 athletes compared to 7,830 at Munich in 1972 and though the last two Olympics, Montreal 1976 and Moscow 1980, suffered from boycotts, the participants numbered over 5,000.

When the Greeks got the nod for the first of the modern Olympics they were in jitters as their economy was shattered and there was political unrest not only in Greece but also in the Balkans. The Greeks had only two years to prepare for the Games and the treasury was almost empty.

Eventually, a Greek businessman George Averoff donated 920,000 drachmas in gold for reconstruction of the pan—Athenean Stadium, architect Anastasios offered his services, and the issue of Olympic stamps brought in another 400,000 drachmas. The royal family also provided the help.

The first Olympic Games got under way on April 5, 1896. Greece's King George I opened the Games saying "I declare the opening of the first International Olympic Games in Athens".

The events included were athletics, cycling, gymnastics, fencing, shooting, swimming, rowing, tennis, weightlifting and wrestling.

Though a majority of the par-

Sir Hugh Springer, Secretary General of the Association of Commonwealth Universities (1970-78), has been appointed Governor-General of Barbados, West Indies.

ticipants were from Greece, the showing was poor and the local spectators were angry when an American Robert Garrett with a throw of 29.15 metres (present world record is over 71 metres) won the discus throw.

A new event, a foot race from the ancient battle ground of Marathon to the Olympic stadium, was added at the last minute. This long distance race became known as the "marathon". The victor was a Greek followed by six other Greek nationals with the only exception of third placed Gyula Kellener of Hungary.

The USA, starting with a gold medal by James Comally in hop, step and jump, had nine victories and two were won by Australians. Garrett also won the shot put. Australian Edwin Flack, representing the London Athletic Club, won the 800 metres and 1,500 metres.

New Asian shot put mark

Chinese athlete Li Meisu is reported to have established a new Asian Women Shot Put record in regional competition in Beijing. Li Meisu threw the ball 18.34 mts to beat the Asian record 18.15 mts set by Shen Lianan three years ago.

Sports Authority of India is created

The Sports Authority of India (SAI) has formally come into existence.

The SAI was registered as a Society on March 16 and the appoinment of Maj. Gen. Narinder Singh and Mr. A.S. Talwar as Director-General and Secretary respectively has been confirmed.

The SAI has begun functioning with informal assistance from the staff of the 9th Asian Games Special Organising Committee. The aims and functions of the SAI are being finalised, it is learnt.

Prime Minister Smt. Indira Gandhi is the President of SAI with Sports Minister Shri Buta Singh as Vice-President.

News from Abroad

Cyprus-France protocol

A fifth protocol for Cultural and Technical cooperation between Cyprus and France for the 1984-85 period, was signed at the Foreign Ministry on February 10.

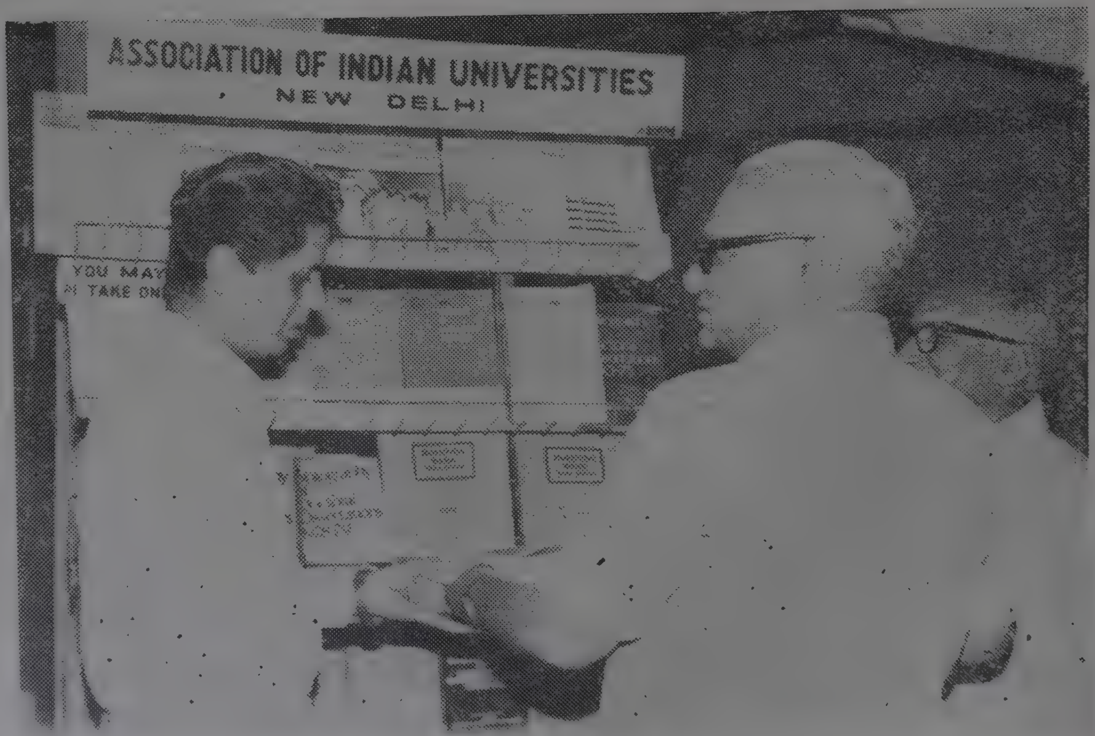
The protocol provides for cooperation between the two countries in the fields of education, science, culture, art and mass communication media.

The Protocol was signed on the Cyprus side by the Acting Director-General of the Foreign Ministry, Markides and on the French side by the Acting Director-General of the Cultural Department of the French Foreign Ministry, Prettre.

[Courtesy—Cyprus News]

AIU Arranges Book Exhibition

The AIU organised a Book Exhibition at Nagpur University on March 28 and 29, 1984. The exhibition was much appreciated by the academics and the student community. The Vice-Chancellor, Shri G.B. Kadam also visited the book exhibition. He is seen in the photograph taken on the occasion.



INDIAN INSTITUTES OF TECHNOLOGY

BOMBAY, DELHI, KANPUR, KHARAGPUR AND MADRAS

Joint admission to 3-semester M.Tech. programmes July 1984.

General:

Applications are invited for admission to the 3-semester MASTER OF TECHNOLOGY (M.Tech.) programmes offered by the five Institutes as well as M. Arch. and two year MCP, MRP Programmes at IIT, Kharagpur only.

Disciplines:

Disciplines and areas of specialisations for the Master's Programmes of the IITs are given in the Information Booklet that would be sent along with the application form.

Each of these programmes is sufficiently flexible and provides considerable choice of electives not only to give specialisation in selected fields but also to meet the diverse interests of engineers and scientists from different disciplines.

Minimum Qualifications for Admission:

The candidates for admission to the Courses mentioned above must have qualified at the Graduate Aptitude Test in Engineering (GATE) held on 26th February, 1983 or 3rd December, 1983 and must possess a Bachelor's degree in Engineering or equivalent or Master's degree in Science as stated in the Annexure to the GATE brochure/Information Booklet.

Candidates who have been successful in the GATE but whose results in the qualifying degree examination have yet to be declared are also eligible to apply provided they complete all formalities towards the degree latest by August 1st, 1984. They will be required to produce such a course completion certificate at the time of joining and their admission will be provisional subject to their passing in the qualifying examination. Based on the GATE score obtained, candidates will be called for counselling to one of the Institutes of their choice. Following the counselling they would be required to complete the choice sheet indicating their order of preference for the courses offered by the Institutes. Admission will be based on the GATE score; weightage for the marks obtained in the qualifying examination (B.E., B.Tech. etc.) may be given up to a maximum of 30 per cent. Admission for each candidate will be considered strictly on the basis of merit and in the order of preference listed by him/her. Admissions are subject to the candidates being found medically fit.

Reservation for Scheduled Castes/Scheduled Tribes:

Certain percentage of seats are reserved for candidates belonging to the scheduled castes and scheduled tribes as per rules. However, to be considered for admission they should have qualified at the GATE 1983, February or December.

Admission of Sponsored Candidates:

Candidates fully sponsored and financed by their employers will be considered for admission without qualifying at the GATE provided they have secured in the qualifying examination an average percentage of marks not less than that specified by the Institute to which they apply. Their admission will be done separately by each Institute and they are requested to contact the Institutes of their choice for application forms and mail the completed applications to the same Institutes.

Scholarship:

All candidates, including the sponsored candidates, who have been admitted to an M.Tech. programme through the GATE merit list will be awarded a scholarship of Rs.600/- per mensem for the entire duration of the programme.

However, the sponsored candidates should produce from their employers a 'No Objection Certificate' to receive the scholarship.

Information Booklet and Application Form:

These can be obtained by sending

i) the application/registration fee of Rs.20/- by a CROSSED Indian Postal order/Bank draft in favour of IIT, ________ *, payable at IIT, ________ * (*Insert place of IIT to which you are making the request)

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Travel Grants to the United States

The U.S. Educational Foundation in India, "Fulbright House", 12 Hailey Road, New Delhi 110 001, invites applications no later than June 15, 1984, for a few Travel Only grants to the United States from Indian scholars who have research or teaching assignments in the U.S. beginning September 1984, or later. Only those with programmes for a minimum period of three months will be considered.

Candidates must:

1. have a Ph.D. degree or equivalent published work.
2. be Indian citizens and be present in India at the time of application.
3. be proficient in English.
4. be in good health.
5. not have been in the U.S. during the last four years to teach or do research.
6. be accepted by a recognised U.S. university or research institution for post-doctoral research and/or as a visiting lecturer and must have assurance of dollar finance to cover their expenses in the U.S. for the duration of the assignment. The letter of acceptance must show the nature and duration of the assignment, and must be accompanied by evidence of dollar support, at the rate of not less than $ 1000 per month and not more than $20,000 per academic year. The evidence of dollar support could be in the form of a grant or fellowship offered by American universities or research institutions or by Indian universities or research institutions.

The grant will provide round-trip economy class air travel, by the most direct route, from the candidate's ordinary place of residence or his academic institution to his U.S. institution and back. Excursion fare tickets valid for 120 days will be provided for those with programmes of less than four months duration in the U.S. Travel will be arranged by the Foundation, and grantees must travel on U.S. visas issued against the IAP-66 provided by the Foundation and must conform to rules and regulations of the U.S. Government applicable to all exchange-visitor visa holders.

For application forms and further details contact the Director, U S. E.F.I., " Fulbright House", 12 Hailey Road, New Delhi 110001, before **JUNE 15, 1984**.

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Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Sudhakar, Kurupati. *Population genetic studies among four tribal groups of Surat district*, Gujarat. U Delhi.

Microbiology

1. James, M. Arul. *Studies on the microbial pathogens,* Salmonella *and* Vibrio parahaemolyticus *in selected marine products*. U Cochin.

Biochemistry

1. Basu, Krishna. *Carbohydrate metabolism of Spirillum lipoferum*. U Calcutta.
2. Chakraborty, Arunkumar. *Biochemical studies on electro-acupuncture treatment in experimental animals*. U Calcutta.
3. Gupta Roy, Bipasha. *Protein kinases in yeast*. JNU, Delhi.
4. Patil, Mandakini B. *Some biochemical studies on* Alternaria alternata (Fr.) *Keissl with special reference to production of proteases*. Nagpur U.
5. Pohit, Jayasri. *Studies of zinc nutrition in* Acne vulgaris. U Calcutta.
6. Rajasekhar, Vinagolu Krishnamachari. *Phytochrome regulation of chloroplast development in* Sorghum bicolor. JNU, Delhi.
7. Ramabrahmam, Varanasi. *Theoretical studies on protein folding-protein crystal structure data analysis*. U Hyderabad.
8. Seethambaram, Yelamanchili. *The biochemistry of photosynthesis and nitrogen assimilation in relation to performance of rice and pearl millet under a zinc deficiency*. U Hyderabad.
9. Sen, Ujjwala. *Studies with extrachromosomal elements as substrate of a new endonuclease of* Escherichia coli. U Calcutta.
10. Sreedhar, Renuka. *Endocrinological aspects of nutritional variation*. U Calcutta.

Marine Biology

1. Parvati, C. *Physiological and biochemical responses of carps,* Cyprinus carpio, Labeo rohita and Cirrhinus mrigala *subjected to malathion exposure at different temperatures*. SKU, Anantapur.

Botany

1. Agarwal, Munna Lal. *Studies on the phytotoxic effects of certain nematicides on the growth and development of healthy and nematode infected plants of* Lycopersicon esculentum *Mill and* Solanum melongena L. Meerut U.
2. Basha, S.K. Mahaboob. *Physiological studies on the effect of phosphorus and potassium deficiency in peanut*, Arachis hypogaea L. *plants*. SVU, Tirupati.
3. Chakradev, Smita. *Studies on leaf protein concentrates*. SNDT, Bombay.
4. Ghosh, Samarendranath. *Studies on the leaf-inhabiting fungi of West Bengal*. U Calcutta.
5. Ghosh, Satyabhama. *Studies on the submerged culture of morel mushroom mycelium*. U Calcutta.
6. Nageshwar Rao, P.P. *Toxicity assessment and pollution potentials of insecticides*. Vikram U, Ujjain.
7. Parvathi, K. *A study of root-inhabiting fungi and vesicular-arbuscular mycorrizal fungi of groundnut and other hosts*. Nagarjuna U.
8. Patel, Pushpa. *Germination mechanism of a few weeds of crop lands*. Vikram U, Ujjain.

9. Ray, Pipush. *On the taxonomy and phytogeny of a few centrospermous families with reference to pollen morphology.* U Calcutta.

10. Sabale, Anjali Baburao. *Studies in photosynthesis in plants.* Shivaji U, Kolhapur.

11. Satendra Prasad. *Experimental studies on apical dominance.* Meerut U.

12. Sen, Bani. *Structural and developmental study of angiosperm wood (two plants as model).* U Calcutta.

13. Shrivastav, Archana. *Evaluation of toxicological potentials of certain selected pesticides.* Vikram U, Ujjain.

14. Shrivastava, Ashok. *Studies on cell wall degrading enzymes of* Pseudomonas marginata. SPU, Vallabh Vidyanagar.

15. Sriramachandra Murty, N. *Genetics of quantitative and qualitative characters and cytogenetics of certain mutants in chilli,* Capsicum annuum. Nagarjuna U.

16. Sudhir Kumar. *Epidermal studies in cyperaceae.* Meerut U.

Zoology

1. Bhattacharyya, Subhra. *Investigation on the origin R factors from chromosomal genes.* U Calcutta.

2. Das, Swapankumar. *Cytological and cytochemical effects of metallic bolts on mammalian systems.* U Calcutta.

3. Deshmukh, Sudhir Bhaurao. *Biology of* Mystus cavasius *Ham Buch.* Marathwada U, Aurangabad.

4. Ghosh, Ranjit Kumar. *Taxonomic and ecological studies on Indian mammals.* U Calcutta.

5. Gouda, Radha Krishna. *Effect of insecticidal pollution on certain tissues of fishes.* Berhampur U.

6. Jagannatha Rao, K.S. *DDT and dieldrin effect on AT Pase system of selected poikilo and homeotherm and also antidote screening.* SVU, Tirupati.

7. Janak Singh Tara. *Investigations on the insect pests of mulberry,* Morus sp. *In Jammu region of J&K State.* U Jammu.

8. Khan, M. *Histology and histochemical studies on the alimentary canal and malpighion tubules of certain bugs, Homopherans with special reference to digestive physiology.* Vikram U, Ujjain.

9. Narayana Pillai, K.G. *The post-embryonic development of the ovary of rat fleas* Xenopsylla cheopis *and* X astia *(Siphonaptera: Pulicidae).*U Ker, Kariavattom.

10. Ramakrishna, B. *Some aspects of biochemical specificity of selected classes of animals.* SVU, Tirupati.

11. Ramakrishnan, P.R. *A study of the ontogenetic interrelationships between hepatic alphafetoprotein, cytosol estrophilin and cell proliferation in the albino rat.* U Delhi.

12. Saha, Pujushkanti. *A taxonomic study of the forcipomyian midges (Caratopogonidae Diptera) of India.* U Calcutta.

13. Sree, V. Vani. *Studies on primary productivity in river Krishna and two fresh water bodies in Nagarjuna University Campus. Andhra Pradesh, India.* Nagarjuna U.

14. Subbarao, D. *Investigations on environmental requirements and pollution tolerance of certain insect fauna into river Kham.* Vikram U, Ujjain.

Medical Sciences

1. Abbas, Hameed Lazim. *Treatment of osteomyelitic bynon invasive electromagnetic technique and its relation to the endocrine system in rabbit.* Bhopal U.,

2. Dewan, Rita. *Effects of new antitubercular drugs on the metabolism of mycobacteria.* U Delhi.

3. Kapoor, Ashok Kumar. *Characterisation of streptococcal deoxyribonucleases and their immunological response in strepto coccal infections.* U Delhi.

4. Mishra, M. *Dermatoglyphics study in Indian childhood cirrhosis.* Bhopal U.

5. Saikh, Kamaluddin. *Comparative immunology of* Neisseria gonorrheae *and other* Neisseria *species of human importance.* U Calcutta.

6. Sinha, T. Jai Mangal. *Polymers in medicine and surgery: Cellulosic systems.* IIT, Delhi.

Agriculture

1. Bhat, Abdul Ahad. *Studies on queen rearing and breeding of Apis cerana indica F. (Apidae: Hymnoptera).* HP Krishi, Palampur.

2. Chauhan, Kunwar Pal Singh. *Studies on potato* Solanum tuberosum *L. seed production.* Meerut U.

3. Das, Jatindranath. *Effect of various micro-nutrients, their concentrations and number of sprays on the growth, yield and quality of tomato,* Lcopersicon esculentum *Mill.* Meerut U.

4. Khare, Krishna Behari. *Effect of rate of nitrogen and phosphorus application and frequency of irrigation on the performance of wheat varieties.* JN Krishi, Jabalpur.

5. Phugat, Madan Pal. *Manurial studies of paddy-wheat and maize-wheat rotations.* Meerut U.

6. Sharma, Prakash Chand. *Cytogenetic studies in the genus* Cicer *L. and some other pulse crops.* Meerut U.

7. Sharma, Raman Kumar. *Biochemical, genetic studies in relation to stability and production potential in raye,* Brassica juncea (L) *Czern and Coss.* PAU, Ludhiana.

8. Tiwari, Kanhaiya Lal. *Direct residual and cumulative effect of phosphorus and farmyard manure on a fixed soybean-wheat rotation.* JN Krishi, Jabalpur.

Veterinary Science

1. Baruah, Gautam Kumar. *Studies on prevalence and, etiopathology of egg drop syndrome in poultry in Punjab.* PAU Ludhiana.

2. Kewal Krishan. *Evaluation of some temperate aad alpine forages (nutrients composition and* In vitro *digestibility) and* In vivo *studies on ensiling of sub-tropical grasses.* HP Krishi, Palampur.

3. Prasad, Lala Naresh. *Etiopathology of mastitis in goats with special reference to mycoplasma infection.* PAU, Ludhiana.

CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in AIU Library during **March, 1984.**

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Gupta, Dipankar. Knowledge and the state : A critique of practical science, *J Hr Edn* 7(3), 1982, 189-99.

Seshadri, C. Research in philosophy of education. *Indian Ednl Rev* 18(4), 1983, 99-105.

EDUCATIONAL PSYCHOLOGY

Jindal, S.K. and Padhan, Netranand. Security-insecurity, adjustment, socio-economic status and family structure as the predictors of academic achievement of intermediate students. *Indian Ednl Rev.* 18(4), 1983, 58-65.

Panda, S.K. and Mishra, R.K. Effect of sex, training and experience on the personality development of teachers. *Indian Ednl Rev* 18(4), 1983, 111-16.

Sinha, A.K. Mental health in university students : A pilot study. *ICSSR Res Abs Q* 10(3&4), 1981, 23-32.

Weinert, Franz E. Self-regulated learning as an instructional prerequisite, method and objective. *Education* 28, 117-28.

EDUCATIONAL SOCIOLOGY

Goldschmidt. Dietrich. The university as an institution : Present problems and future trends. *Education* 28, 69-80.

Hackney, Ann. Educating the severely mentally handicapped : Lessons for mainstream education. *Oxford Rev Edn* 9(3), 1983, 269-75.

Kidwai, M. Saleem. Reservations in Universities. *Mainstream* 22(29), 17 Mar, 84, 25.

Levin, Henry M. Assessing the equalization potential of education. *Comp Edn Rev* 28(1), 1984, 11-27.

Sinha, Arvind K. Dimensions of organizational climate : A case of university departments. *Indian Ednl Rev* 18(4), 1983, 1-13.

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Bean, John P. and Kuh, George D. A typology of planning problems. *J Hr Edn* 55(1), 1984, 35-55.

Merson, John C. Strategic and financial planning. *New Directions Hr Edn* (42), 1983, 5-10.

EDUCATIONAL ADMINISTRATION

Amrik Singh. Foundation and role of UGC. *J Hr Edn* 7(1-2), 1981, 31-44.

Falender, Andrew J. Providing focus for financial management. *New Directions Hr Edn* (42), 1983, 73-83.

Lewis, Lionel S. and Doyno, Vic. The definition of academic merit. *Hr Edn.* 12(6), 1983, 707-19.

Perrucci, Robert and others. Market conditions, productivity, and promotion among university faculty. *Res Hr Edn* 19(4), 1983, 431-49.

Stevens, Jeanine and Hamlett, Bruce D. State concerns for learning : Quality and state policy. *New Directions Hr Edn* (43), 1983, 29-37.

CURRICULUM

Ahuja, Chaman. Theatre education in the Indian universities. *J Hr Edn* 8(1), 1982, 97-101.

Baumgartel, Howard J. and others. Changes in organisational climate and management education, 1968 to 1981 : Some warning signals. *Eco & Pol Weekly* 19(8), 25 Feb 84, M-15-21.

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Ananthakrishnan, M.V. Place of laboratory work in science/engineering education. *J Hr Edn* 7(3), 1982, 243-51.

Patted, G.M. and Suryavanshi, V.R. Improving college instruction through self-instructional micro-teaching. *Indian Ednl Rev.* 18(4), 1983, 66-71.

Shirur, Rajani R. Teaching-learning in higher education : MBO style. *J Hr Edn* 7(3), 1982, 302-6.

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INDIAN INSTITUTE OF TECHNOLOGY, KANPUR 208016

Notice for Admission to M.Tech., Ph.D. & M.Sc. in July 1984

Admission of students will be made for the session 1984-85 commencing on 23-7-84 in the following Post-Graduate Programmes at IIT Kanpur: More detailed information is given in the information Brochure which will be sent alongwith the application form.

MASTER OF TECHNOLOGY (M.Tech.)

The admissions to the M.Tech. programme in Indian Institutes of Technology are being Coordinated this year through a Joint Advertisement which is appearing separately. The procedure for obtaining the application form and sending it back after completion is given in the joint advertisement.

Any candidate interested in one or more Departments/Programmes at IIT Kanpur in the above application form is required to separately furnish the following particulars on Plain paper to the Assistant Registrar (Academic)) I.I.T. Kanpur-208016.

1—Name 2—Mailing Address 3—Year, Registration Number and Score of GATE 4—IIT to which the candidate has sent his application 5—Departments/Programmes at IIT Kanpur the candidate is interested in 6—University, Programme, Year, Marks and Rank for the last two years.

In addition to the Joint Advertisement the following salient points and details be also noted.

A selected number of candidates for each of the Programmes will be called for Counselling/Interview by the concerned Department/Programmes at I.I.T. Kanpur. These candidates will be paid to and fro second class railway fare. Admission will be based on the GATE Score/Marks obtained in Qualifying Examination (B.E., B.Tech etc.) and/or interview. Candidates admitted to M.Tech. Programme if found suitable can be allowed to change over to Ph.D. Programme after one semester.

Admission to M.Tech. Programme is also available to sponsored candidates. Full time or Part-time. However, candidates sponsored for full time and qualified through GATE (Graduate Aptitude Test in Engineering) are eligible for Institute Scholarships also. Details are available on request from Assistant Registrar (Academic) I.I.T. Kanpur-208016.

DOCTOR OF PHILOSOPHY (Ph.D.)

Programmes are available in Engineering in the Departments of
1—Aeronautical Engineering 2—Chemical Engineering 3—Civil Engineering 4—Computer Science 5—Electrical Engineering (including Electronics) 6—Mechanical Engineering 7—Metallurgical Engineering and in the Inter-disciplinary Programmes of
1—Industrial & Management Engineering 2—Materials Science 3—Nuclear Engineering & Technology.

SCIENCE

In the Departments of
1—Chemistry 2—Mathematics (separate Programmes in Mathematics & Statistics) and 3—Physics

HUMANITIES & SOCIAL SCIENCES

In the HSS Department in the areas of
1—English 2—Philosophy and 3—Sociology

MINIMUM QUALIFICATIONS

A high second class Master's degree or equivalent in the respective or allied areas.

SCHOLARSHIP

Rs. 700/- per month to all the selected candidates in Engineering and Rs. 600/- per month to all the selected candidates in Science and Humanities and Social Sciences with an enhancement of Rs. 100/- per month after two years of satisfactory performance in the programme (likely to be revised).

MASTER OF SCIENCE (M.Sc.)

Programmes are available in the Departments of
1—Chemistry 2—Mathematics (separate programmes in Mathematics and Statistics) 3—Physics.

DURATION

Two years (i.e. four semesters).

MINIMUM QUALIFICATION

B.Sc. in appropriate areas.

SCHOLARSHIP

Rs. 170/- per month (plus freeship) for 25% of the candidates. Freeship for an additional 10% candidates.

GENERAL INFORMATION

1. More information about the areas of study and the eligibility of candidates with different backgrounds will be supplied with the application form.

2.(a) A selected number of candidates for each of the programmes will be called for interview at IIT Kanpur. The candidates for Ph.D. and M.Sc. programmes may have to take a test also.

(b) The candidates called for Ph.D. and M.Tech. programmes will be paid to and fro second class railway fare; however, candidates for M.Sc. programme will not be paid railway fare.

3. Fifteen per cent of the seats are reserved for Scheduled Caste and 7½% for Scheduled Tribe candidates and they can apply irrespective of their class/division in their qualifying examination.

4. M.Tech. and Ph.D. students may be required to assist in the teaching/departmental work to the extent of six hours per week.

5. Admission of external candidates, sponsored candidates and part-time candidates are also available in Ph.D. programme. However, they are not eligible for institute scholarship. Details are available on request.

HOW TO APPLY FOR ADMISSION TO Ph.D. AND M.Sc. PROGRAMME

1. Candidates who possess the qualification outlined above (including those who are appearing/have appeared/will be completing their qualifying examinations not later than JULY 1984) may send a requisition for application on plain paper.

2. Application forms together with detailed instructions including eligibility conditions etc. for admission to each programme of study can be had either personally from the Office of Academic Section or through post by sending request alongwith a self addressed stamped envelope (Rs. 2.50) of the size 28 cm × 13 cm to the Assistant Registrar (Academic) Indian Institute of Technology Kanpur-208016, the intended programme duly superscribed on the envelope.

3. Those who wish to apply for admission to more than one programme/department should send separate envelopes with necessary postage stamps.

The candidates should fill up the application forms carefully following the directions given in the application form/information brochure.

NOTE: Incomplete applications without the required information/enclosures will not be considered.

LAST DATE FOR THE RECEIPT OF COMPLETED APPLICATION FORM: MAY 7, 1984.

MMG—662A

CLASSIFIED ADVERTISEMENTS

ALIGARH MUSLIM UNIVERSITY
ALIGARH
Advertisement No. 1/84-85

Applications on the prescribed form are invited for the following posts:

1. **Reader in Physiology, Department of Physiology**

Scale of Pay : Rs. 1200-50-1300-60-1900 plus allowances.

Qualifications

I. Essential : M.D. (Physiology), M.B.B.S. with M.Sc. (Physiology) Ph.D. (Medical Physiology) D.Sc. (Medical Physiology).

Teaching/Research Experience

As Lecturer in Physiology for five years in a Medical College.

II. Desirable : Original research publications in the speciality in Indian and foreign journals.

2. **Anaesthetist-cum-Registrar, (Post Partum Programme) Department of Obstetrics & Gynaecology.**

Scale of Pay : Rs. 700-40-900-EB-40-1100-50-1300 plus allowances.

Qualifications

I. Essential : M.B.B.S. with two years experience of Anaesthesia.

II. Desirable : D.A./M.D.

3. **Lecturers in Psychology, Department of Psychology**
4. **Lecturer in Psychology, Women's College.**
5. **Lecturers in Statistics, Department of Statistics.**

Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances.

Qualifications

(a) A Doctor's degree or research work of an equally high standard;

(b) Consistently good academic record with first or high second class (B in the seven point scale) Master's degree in the relevant subject or an equivalent degree of a foreign University.

Having regard to the need for developing inter-disciplinary programmes the degrees in (a) and (b) above may be in relevant subject.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualification prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a consistently good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research Laboratory/Organization on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within five years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

Higher initial start may be given to candidates possessing exceptional qualifications and experience. Candidates interviewed may be paid contribution towards their T.A. equal to one single second class Railway fare only.

Prescribed application forms and instructions may be had from the Assistant Registrar (Selection Committees) Registrar's Office, A.M.U. Aligarh on payment of lump sum amount of Rs. 5/- in cash (to be deposited in the Cash Section, Finance Office, A.M.U., Aligarh) or through an Indian Postal Order payable to the Finance Officer, A.M.U., Aligarh either personally or by sending a self-addressed stamped envelope of 23× 10 cm. **Last date for receipt of applications is 10th May, 1984 (upto 4.00 p.m. only). Incomplete applications and those received late will not be considered.**

Note : **Suitable persons may be kept on panel for future appointment.**

Zamir Ahmed Khan
REGISTRAR

SARDAR PATEL UNIVERSITY
VALLABH VIDYANAGAR
Pin-388 120 (Gujarat)
Notification No. EST/1(1984-85)

Applications are invited in the prescribed forms available from the University Office on payment of Re. 1/- in cash or by Indian Postal Order for the following posts so as to reach the undersigned on or before **15-5-1984.**

1. **Professor :** (Rs 1500-60-1800-100-2000-125/2-2500).

(a) Chemistry (Inorganic Chemistry)
(b) Physics (X-Rays)
(c) Economics (Monetary Economics)
(d) History
(e) Political Science
(f) Sanskrit.

2. **Reader :** (Rs. 1200-50-1300-60-1600 Assessment-60-1900).

(a) Physics (X-Ray, Crystallography and electron diffraction/Spectroscopy)
(b) Chemistry—(Two posts)
1. Analytical/Polymer Chemistry
2. Organic Chemistry.
(c) Physics—(Two posts)
1. Electronics
2. Theoretical Physics.
(d) Mathematics—(Two posts)
1. Analysis/Algebra
2. Applied Mathematics
(e) Statistics (Theoretical Statistics/Probably Theory/Operational Research

(f) Commerce

(g) English

(h) Economics—(Quantitative Economics/Rural Deve., Micro-Economics/Economic Planning),

3. **Lecturer :** (Rs. 700-40-1100-50-1300-Assessment-50-16009).

(a) Physics ; (b) Mathematics—(Preferably in Algebra); (c) Economics; (d) Commerce; (e) Gujarati; (f) Hindi.

4. Trained Instructor in Drama Performing Art : (Rs. 700-40-1100-50-1300-Assessment-50-1600).

5. Co-ordinator—(National Adult Education Programme) (Rs. 1100-50-1300-EB-60-1600).

6. Technician in Chemistry : (Rs. 700-40-1020-EB-45-1200-50 - 1300-EB-50-1500).

7. Press Manager—(Rs. 650-30-740-35-810-EB-35-880-40-1000-EB-40-1200)

8. **Technical Assistant :** (Rs. 500-25-650-EB-25-750-EB-30-900).

(a) Chemistry—(Polymer).
(b) Physics—(Electronics).

Details of the prescribed qualifications etc., will be supplied alongwith the application forms.

All the posts except No. 5 carry benefits of Dearness Allowance, Provident Fund, Gratuity or Pension Scheme as per University Rules.

Preference will be given to qualified candidates belonging to Scheduled Caste/Schedule Tribes, Socially and Educationally and/or Economically backward Classes.

R.C. Thakkar
REGISTRAR

GOKHALE INSTITUTE OF POLITICS AND ECONOMICS
PUNE-411004

Applications are invited for the following posts in the U.G.C. Pay-Scales.

One Professor in Economics.

Five Readers of which four in General Economics, Agricultural Economics, Input Output Analysis; and one in Rural Sociology.

Two Lecturers in Agricultural Economics and Applied Statistics.

One Research Associate for Studies in Economics of East European Countries.

Minimum Qualifications : A higher second class at B.A. and M.A. together with Ph.D. in Economics/ Sociology/Econometrics, and experience of Teaching and Reseafch Work.

Prescribed Application Form and further particulars may be obtained from the Registrar. Preference to candidates belonging to Backward Classes provided they have the requisite qualification. Application Form duly completed should reach the undersigned before **31st May, 1984.**

N. Rath
DIRECTOR

UNIVERSITY OF CALICUT
(ADMINISTRATIVE 'F' SECTION)
Calicut University P.O.

No. Ad. F1/9214/83

Dated : 4-4-84

NOTIFICATION

Applications are invited from qualified candidates for appointment to the undermentioned posts in this University.

S. No.	Name of Department	Category	No. of posts	Nature of vacancy	Community for which reserved	Specialisation, if any
1	2	3	4	5	6	7
1.	Mathematics	Professor (Maths)	1	Permanent	E/T/B/.	—
		Lecturer (Maths.)	1	Permanent	Ezhava/Thiyya/Billava	
		Lecturer in Statistics	1	-do-	Open	—
2.	Chemistry	Reader	1	-do-	E.T/B	Environmental Chemistry
3.	Life Science	Lecturer	3	-do-	1st : Open 2nd : E/T/B 3rd : Open	Physiology Biochemistry Microbiology
4.	History	Reader	1	-do-	E/T/B	Kerala Studies
5.	Economics	Reader	1	-do-	Open	Applied Economics **Desirable:** A fair knowledge of Mathematics
6.	Philosophy	Reader	2	-do-	One post Open & the other E/T/B	Symbolic Logic/ Analytical Philosophy (One post)
7.	Psychology	Reader	1	-do-	Open	Organisational Behaviour
8.	School of Drama	Asst. Director	1	-do-	Open	—
9.	Education	Professor	1	Temporary (likely to be made permanent)	E/T/B	—
		Reader	2	Permanent	One Open & the other E/T/B	Educational Technology (1 post) Student Teaching & Extension Education (1 post)
10.	Journalism & Mass Communication	Reader	1	-do-	E/T/B	—
		Lecturer	1	-do-	E/T/B	—
11.	Arabic	Reader	1	-do-	E/T/B	Commercial Arabic as desirable qualification
		Lecturer	1	-do-	Open	—
12.	Malayalam	Reader	1	Permanent	E/T/B	Linguistics
13.	Hindi	Lecturer	1	-do-	Open	—
14.	Russian	Reader	1	-do-	Open	Russian Philosophy
		Lecturer	1	-do-	E/T/B	—
15.	Sanskrit	Reader	1	-do-	Open	Vedanta
		Lecturer	1	-do-	Open	Vyakarana as desirable qualification
16.	Commerce & Management Studies	Reader	3	-do-	1st & 3rd Open 2nd E/T/B	Marketing (2 posts) & Personal Management (1 post)
		Lecturer	2	-do-	Open (one) the other S.C./S.T.	General Management (1 post) Personal Management (1 post)
17.	Physics	Reader	2	Temporary but likely to be made permanent	One post reserved to S.C./S.T. & the other Open	Experimental Nuclear Physics / Experimental Solid State Physics/ Theoretical Physics.
		Lecturer	1	Permanent	Open	—

Scale of Pay of Professor	.. Rs. 1650-75-2175
Scale of Pay of Reader & Asst. Director	.. Rs. 1200-60-1800
Scale of Pay of Lecturer	.. Rs. 800-50-1600

If no suitable candidates are available from the communities for which the posts are reserved, candidates from other reserved communities will be considered. If no candidates from other communities are available the posts will be treated as Open as per rules of communal rotation.

The prescribed application forms and other details can be had from the Deputy Registrar (Admn.) on request enclosing Indian Postal Orders for Rs. 5/- drawn in favour of the FINANCE OFFICER, UNIVERSITY OF CALICUT and payable at CALICUT UNIVERSITY P.O. and also self addressed stamped (Rs. 1.30) envelope.

The last date for receipt of applications in the University is **May 15, 1984.**

REGISTRAR

PUNJABI UNIVERSITY
PATIALA

(Advertisement No. II/PRO/Estt./April 1984).

Applications are invited for the following posts:

1. **Director, Correspondence Courses:** (One).
(Grade : Rs. 1500-60-1800-100-2000-125/2-2500).

Qualifications

"An eminent scholar with published work of high quality actively engaged in research. About ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Persons conversant with the running of correspondence courses or a similar job and having experience of teaching English / History / Economics / Political Science/Punjabi will be given preference."

Adequate knowledge of Punjabi is essential.

2. **Readers :** (Two in Business Administration and Commerce and one each in Botany, Education & Community Services, Statistics and Philosophy)
(Grade : Rs. 1200-50-1300-60-1900).

Qualifications

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that at least three of these years were as lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record of teaching/research work.

Specializations

Readers in Business Administration and Commerce

For one post—Financial Management. For second post the candidates should have a Master's degree in either Commerce or Economics.

Reader in Philosophy

Either Indian Philosophy or Logic.

3. **Lecturers :** (Two in physics and One in Mathematics).
(Grade : Rs. 700-40-1100-50-1600).

Qualifications

(a) A Doctorate's degree or research work of an equally high standard; and
(b) Good academic record with atleast second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign university.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increment until he fulfills these requirements.

Specializations

Lecturers in Physics

First or high second class M.Sc. in Physics/Applied Physics with specialization in Electronics, followed by:
(i) Post-M.Sc. Course in Electronics and Television Engineering; or
(ii) M. Tech. Course in Electronics; or
(iii) Sufficient practical/teaching experience in Electronics.

OR

B.E. (Electronics) in first/high second division. The applicant should be able to do M.E. in Electronics within a period of five years.

Lecturer in Mathematics

Preference will be given to those who have experience of teaching and research in the areas of Applied Mathematics (Mechanics of Solids and Fluids) and theoretical foundations of Computer Science.

4. **Lecturers—Business Administration and Commeree :** (Four).
(Grade : Rs. 700-40-1100-50-1600).

Qualifications

A Master's degree in Business Administration or M. Tech. in Engineering with first class with the provision that the incumbent would acquire a doctorate degree within a period of eight years.

In the case of allied subjects like Industrial Psychology, Personnel, Management, Business Statistics, Cost Accountancy etc. where Lecturers are required to be recruited with qualifications other than M.B.A. or M. Tech. the minimum qualification shall be the same as prescribed **for posts at Sr. No. 3 above.**

Specializations

(i) Personnel/Legal environment/General Management.
(ii) Managerial Economics.
(iii) Industrial Psychology/Organisational Behaviour.
(iv) Candidates should have a Master's degree in either Commerce or Economic

5. **Research Assistants :** (One each in Mathematics and Hindi).
(Grade : Rs. 550-20-650-25-750).

Qualifications

Master's degree in relevant subject with 55% or more Marks. Candidates having research experience and/or specialized knowledge in the subject will be preferred.

The post of Research Assistants are tenable for two years, which could be extended for another year keeping in view the requirements of the project.

Note

For the posts of Readers & Lecturers, Good academic record will be determined as under:
(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or
(ii) A candidate without Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or
(iii) A candidate not possessing Ph.D. Degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

General

Candidates for the teaching & research posts should possess working knowledge or Punjabi upto Punjabi Praveshka standard. Persons from outside Punjab however be considered for appointment but they will be required to give an undertaking in writing that they will acquire the requisite qualifications in Punjabi within a period of two years.

Higher start within the grade admissible depending upon the ability and experience of the candidate. House rent and Dearness allowance, Provident Fund and Medical facilities according to University rules.

Applications complete in all respects on the prescribed form accompanied by a crossed Postal Order worth Rs. 5/- (Rs. 2/- for candidates belonging to Scheduled Castes/Tribes & Backward Classes) drawn in favour of the Registrar, Punjabi University, Patiala, should reach the University by **11-5-84**. The forms can be had from the Production and Sales Officer, Publication Bureau, Punjabi University, Patiala on payment of Re. 1/- by sending a crossed Indian Postal Order drawn in favour of the Registrar, Punjabi University, Patiala alongwith a self addressed envelope of the size of 25 x 10 cms. stamped with Rs. 1.70 postage which should be superscribed at the top in bold letters. **REQUEST FOR APPLICATION FORM FOR THE POST OF ———.**

Persons already in service should apply through proper channel. Those who are not in a position to submit their applications through proper channel before the due date should submit an advance copy before the due date and regular applications through proper channel by **15-5-84**.

D.S. Kang
REGISTRAR

Printed & Published by M.S. RAMAMURTHY, on behalf of the Association of Indian Universities,
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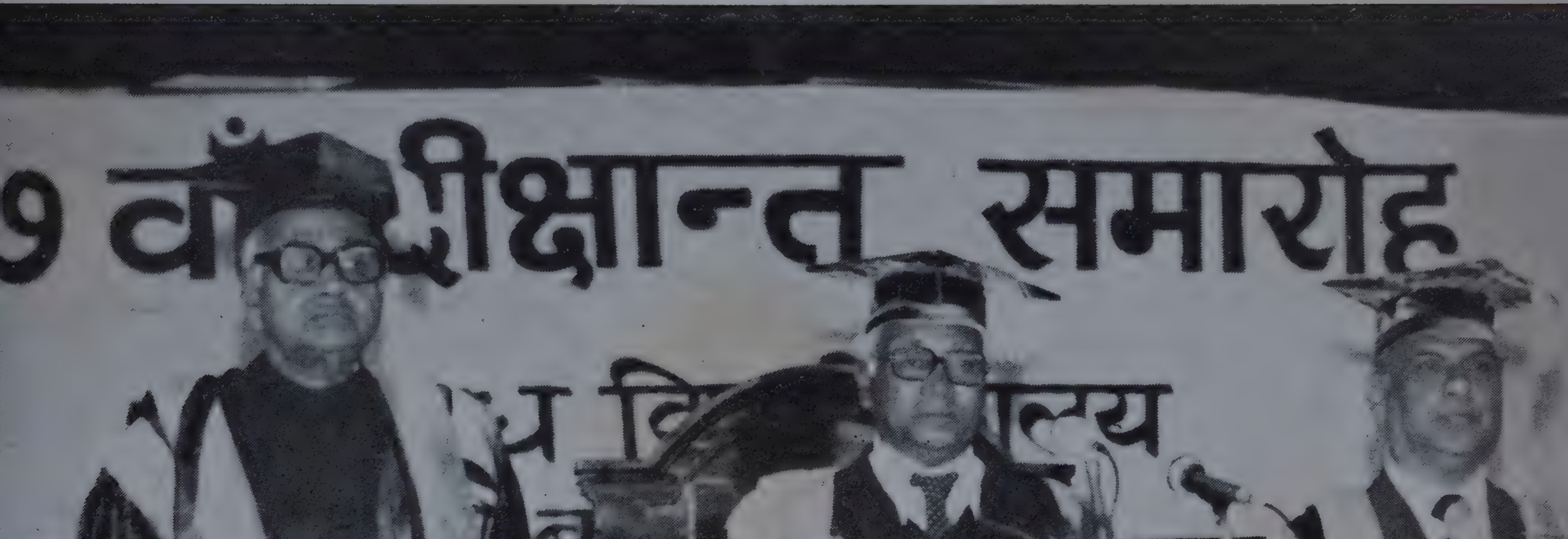
University News

MAY 1, 1984

Re. 1.00



Photograph taken on the occasion of the Convocation of Magadh University. Seen above (from L to R) are : Shri L.P. Singh, former Governor of Assam, Dr. A.R. Kidwai, Governor of Bihar and Shri Fahimuddin Ahmad, Vice-Chancellor of the University.

CLASSIFIED ADVERTISEMENTS

MEERUT UNIVERSITY

MEERUT

Applications are invited for one Post of Professor of Economics in the grade of Rs. 1500-60-1800-100-2000-125/2-2500. The application on prescribed form should reach the Registrar, Meerut University, Meerut-250005, latest by **4-6-1984**.

Minimum Qualifications for the Post of Professor

1. An eminent scholar with published work of high quality, actively engaged in research. Ten years experience of teaching or research Experience of guiding research at doctoral level.

OR

2. An outstanding scholar with established reputation who has made significant contribution to knowledge.

Note: For the above mentioned post other things being equal, preference will be given to Scheduled Caste/Tribe candidates who are considered fit. Such candidates should indicate in their applications that they belong to Scheduled Caste/Tribe and attach certificate to that effect from the District Magistrate of the District to which they belong. No other certificate for this purpose will be entertained.

Prescribed application form can be obtained by sending a self-addressed envelope of size 23 x 10 cm. and stamped worth Rs. 1.30 to the Dy. Registrar (Accounts), Meerut University, Meerut accompanied by a Bank Draft of Rs. 15/- in favour of the Finance Officer, Meerut University, Meerut or by cash payment of Rs. 15/- at the Cash Counter of the University. Cheques I.P.O. or M.O. are not acceptable. While requesting for application form please mention "Application For Teaching Post' on the envelope.

Bholendra Singh
REGISTRAR

SUKHADIA UNIVERSITY

UDAIPUR

Advertisement No. 3 84
Dated 7th April, 1984

Applications are invited on prescribed application form for the following posts in Teaching, Research, Extension and Non-teaching on regular basis in the University, so as to reach the undersigned within 30 days from the issue of publication in the Daily Newspaper. Application form and full details about qualifications etc. can be obtained from the undersigned on payment of Rs. 5/- through crossed Indian Postal Order in favour of the Comptroller, Sukhadia University, Udaipur. A self addressed envelope (27 cms. × 12 cms) duly stamped worth Rs. 1.50 paisa should invariably be sent alongwith the postal order.

1. **Director Research** (Vety. & Animal Science) 1
   Pay Scale : Rs. 1500-60-1800 100-2000-125/2-2500.
2. **Professor**
   (a) Agronomy 5
   (b) Accountancy & Statistics 1
   Pay Scale : Rs. 1500-60-1800-100-2000-125/2-2500
3. **Associate Professor**
   (a) Agriculture Economics 6
   (b) Bio-Chemistry 3
   (c) Chemistry 1
   (d) Limnology & Fisheries 1
   (e) Botany 1
   (f) Economics 1
   (g) Philosophy 1
   (h) Animal Nutrition 1
   Pay Scale : Rs. 1200-50-1300-60-1900.
4. **Assistant Professor**
   (a) Botany 1
   (b) Limnology & Fisheries 1
   (c) Foods & Nutrition 1
   (d) Child Development 1
   (e) Home Management 1
   (f) Jainology 1
   (g) Bio Chemistry 1
   (h) Philosophy 1
   (i) Vety. Gynaecology 1
   Pay Scale : Rs. 700-40-1100-50-1600.
5. **Instructor (Vety. & Animal Science)**
   (a) Vety. Pharmacology 1
   (b) Vety. Nutrition 1
   (c) Vety. Microbiology 1
   (d) Parasitology 1
   (e) Vety. Anatomy 1
   (f) Extension Education (Vety. Surgery & Gynaecology). 1
   Pay Scale : Rs. 860-20-900-25-1000-30-1300-40-1500-50-1750
6. **Technical Assistant**
   (a) Dairy Chemistry 1
   (b) Dairy Technology 1
   (c) Dairy Bacteriology 1
   Pay Scale : Rs. 740-20-900-25-1000 30-1300-40-1420.
7. Farm Superintendent 1
   Pay Scale : Rs. 1000-30-1300-40-1500-50-1800-60-1860.
8. Senior Research Officer: (Population Research Centre) 1
   Pay Scale : Rs. 1150-50-1650 (Old).
9. Lady Research Investigator (Population Research Centre) 1
   Pay Scale : Rs. 430-20-650-25-800 (Old)
10. Technical Assistant (Agriculture) 5
    Pay Scale : Rs. 740-20-900-25-1000-30-1300-40-1420
11. Technical Assistant (Home Science) 2
    Pay Scale : Rs. 740-20-900-25-1000-30-1300-40-1420.
12. Laboratory Assistant/Laboratory Technician (Agriculture) 12
    Pay Scale : Rs. 490-10-550-15-640-20-840.
13. Agriculture Supervisor
    Pay Scale : Rs. 490-10-550-15-640-20-840.
14. Assistant Engineer 1
    Pay Scale : Rs. 1000-30-1300-40-1500-50-1800-60-1860.
15. Technical Assistant (Electronics/Mechanical) 5
    Pay Scale : Rs. 740-20-900-25-1000-30-1300-40-1420.
16. Junior Mechanic (Mechanical/Electronics/Radio/Electrical) 5
    Pay Scale : Rs. 610-15-640-20-900-25-1000-30-1090.
17. Senior Glass Blower 1
    Pay Scale : Rs. 640-20-900-25-1000-30-1180.
18. Plant Operator 2
    (Instructional Dairy Plant)
    Pay Scale : Rs. 740-20-900-25-1000-30-1300-40-1420. 1
19. Technical Assistant
    (Glass Blowing)
    Pay Scale : Rs. 740-20-900-25-1000-30-1300-40-1420.
20. **Laboratory Assistant :**
    (a) Psychology 1
    (b) Drawing & Painting 1
    Pay Scale : 490-10-550-15-640-20-840
21. Laboratory Technician in Geography 1
    Pay Scale : Rs. 490-10-550-15-640-20-840.

Benefits of D.A., House Rent Allowance, P.F. and Leave etc. would be according to University Rules.

General Note

1. Number of posts may be increased or decreased.
2. In case of Professor, Agronomy Associate Professor, Ag. Economics, Bio-Chemistry, Assistant Professor, Home Management, the candidates who have already applied in response to our previous advertisement No. 4/83 dated 23-5-83 and 7/83 dated 23-12-83 need not apply again.
3. The qualifications may be relaxed in case the response is poor.
4. The applications received after the expiry of the last date may also be considered at the discretion of the Vice-Chancellor.
5. 16% posts would be reserved for Scheduled Caste & 12%, for Scheduled Tribe, subject to general Suitability.
6. A higher Start in the grade may be considered for exceptionally qualified candidates.
7. Application form can also be obtained from the following Officers:
   1. The Director (Research), Agril. Expt. Station, Durgapura, Jaipur.
   2. The Dean, SKN College of Agriculture, Jobner.
   3. The Dean, College of Vety. & Animal Science, Bikaner.
8. The University reserves the right not to fill up any of the posts advertised, if deemed necessary.

G.S. Sharma
REGISTRAR

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Editor :

M.S. RAMAMURTHY

Orientation Programme for Principals at Saurashtra University

The Saurashtra University organised a two-day orientation programme for Principals of affiliated colleges under the auspices of the College Development Council of the University on 10th & 11th March, 1984. The objective of the programme was to acquaint principals of the affiliated colleges with modern developments in educational administration and to have a perspective of collegiate education vis-a-vis the problems faced by them. 30 Principals attended the programme.

Shri S.R. Dave, Ex-Vice-Chancellor of the University inaugurating the programme spoke on the problems and perspectives of collegiate education. He stated that the Principal was the key authority in a college and it was the duty of a Principal to co-ordinate the facilities available in the college in respect of the type of students, the teachers and the physical facilities, he had to give leadership and work to fulfil the goals of the institution in the best way possible. He added that the goals of the institution, the goals of the students and the goals of the teachers as existed today looked to be quite different and therefore unless there were committed learners and dedicated teachers and purposeful educational system, it may be very difficult for the teachers and the principals and even the management to make best of their contributions. He said that it is the foremost duty of the Principals to see that the non-learners are isolated so that they become non-effective in the colleges. He appealed to the Principals that with a view to see that the academic freedom was maintained, they try to become effective in all possible ways.

Shri Umakant Pandit, an industrialist of Rajkot, who was the Chief Guest of Honour at this programme said that education and training must result in employment. He urged that the academic institutions should become institutions of excellence. The concept of the status of the graduate in society should go and now the concept should be the excellence of a person. Compromising in any matter, which dilutes excellence should be avoided. He suggested that the Principals and the teachers should visit institutions of excellence in India and observe the wonderful teaching programmes being carried out by those institutions. As against logical thinking he appealed to the members to have lateral thinking.

The acting Vice-Chancellor, Dr. H.G. Desai in his presidential address said that the programme was meant for the professional growth of the Principals and therefore utmost advantage should be taken of such programme. He suggested that the under-privileged students should be given special reading programmes. He observed that utmost care should be taken in respect of bringing the teachers on higher academic level. He suggested steps to be taken in the direction of bringing innovations in the academic activities of the colleges.

The topics covered during the orientation programme includded : (1) improving intellectual climate of the college campus; (2) management and communication; (3) decision-making process; (4) styles of educational leadership; (5) continuing, adult, population education and extension; (6) new directions in management and administration; (7) conflict management; (8) team building; (9) innovation and creativity in management; (10) evaluation : institution and institutional programmes ; (11) teacher evaluation; (12) student evaluation; (13) manpower planning, etc.

The participating principals at the end of the orientation programme felt that it was a useful one and that such programmes should be organised in the future as well with experts in various fields of management invited to talk on different aspects of management. It was also suggested that such programmes should be organised for the teachers of the affiliated colleges. □

University's Budget : A Brief Analysis

D.P. Verma*

Generally speaking the annual budget of a university is taken to be a statement of, more or less, static and meagre income and ever-increasing expenditure. This phenomenon of the widening monetary gap does greatly handicap the functioning of a university, apart from the vital fact that it cuts at the very roots of the concept of 'university autonomy'. However, a study of a university's budgetary figures under certain heads is important and quite useful in the context of some other aspects of its functioning.

An attempt has been made here to analyse the annual allocations made under certain 'heads' to some of the major Departments of the Panjab University, Chandigarh on the non-plan side for the financial years 1980-81, 1981-82 and 1982-83, with the aim of finding out what component of these allocations is being consumed by salaries of the staff and what part of the scarce resources is spent on research and other important activities in the university. The preceding three years have been selected with a view to have the latest figures and data so that the attempt escapes the charge of projecting something that has become out-dated etc. It may, however, be stated at the very outset that this attempt is not an in-depth study undertaken to work out the unit cost of higher education and to determine the productivity side of the work being done in the university. It is a very limited attempt undertaken under obvious constraints and its conclusions would be of a very circumscribed nature and utility, if any. It may also be clarified that the expenditure on salaries etc. would also, to some extent, form part of the expenditure incurred on research programmes and legitimately so, as the primary function of a university teacher is *to teach and to do research* and thereby contribute to the advancement of knowledge.

When the annual budget is presented and considered by the University authorities, it is interesting to hear the harangue that follows; it leaves behind an indelible impression that hardly any discerning attempt has been made to understand what the figures seek to reveal and what is required to be more carefully and seriously studied. Even a cursory perusal of the speeches made in the decision-making bodies would provide ample evidence of this. It is either an act of sheer sychophancy or just something of a stuff loudly projected in a populist vein, which is, more often than not, irrelevant to the subject under consideration.

Our main concern here is to see and understand how the limited resources at the disposal of the university are helping it to undertake its all important task of teaching and doing research for the advancement of knowledge. We may also be able to get perhaps some glimpse of the cost per student based on the expenditure on these select heads as such. This may also help us to have some general idea of the cost effectiveness, in the context of the achievement of the university's aims and objects, though it was not possible to take into consideration every aspect of the expenditure earmarked for the running of the university.

It may also be clarified that the Panjab University is the one major university in the country which finds itself in a very unenviable position so far as the needs of its developmental programmes are concerned. Under the Punjab Re-organisation Act, 1966 the University bacame an inter-state body corporate, with the successor states undertaking to meet only its maintenance-costs in certain proportions. It was made clear by these states that they would not provide anything for the university's developmental programmes. The Ministry of Education, Government of India, therefore, undertook the responsibility of providing it with an annual loan for this purpose with a view to enabling the university to provide for the matching share for U.G.C.'s grants for plan projects and also to carry out certain other essential works which did not qualify for U.G.C. assistance. In view of the peculiarities of this arrangement, no reference is made here to the 'plan-expenditure'.

The university is primarily a post-graduate institution with 45 Departments imparting instruction and undertaking research in the faculties of Science, Social Sciences and Humanities. Four of its major departments impart instructions in professional courses up to the Master's level—the Department of Laws, the Department of Chemical Engineering & Technology, the Department of Commerce & Business Management and the Department of Pharmaceutical Sciences. The under-graduate teaching is mostly done in about 90 of the colleges affiliated to the University though the University's Evening College and the Directorate of Correspondence Courses also undertake teaching up to the degree classes along with some post-graduate programmes as well. These two institutions have, however, not been covered by this analysis.

It is a university with a major thrust in the Science Departments. The Departments of Mathematics and Geology gained the status of Centres of Advanced Studies some 14 years ago; the Departments of Chemistry, Botany and Physics became the Special Assistance Departments in subsequent years; the Department of Zoology has come within this ambit and a formal announcement only is awaited. Some of the Social Science Departments have now come of age and have been covered by the Special Assistance Programme, e.g., the Department of Sociology. Though unfortunately the Department of Botany has received a set-back in this matter, yet

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Registrar, Panjab University, Chandigarh.

all these achievements bear ample testimony to the important contribution made by the University to the advancement of knowledge. The Departments with Advanced Centres and those with the Special Assistance Programmes received considerable assistance from the U.G.C. in the form of senior faculty and other positions and also substantial support for laboratory equipment and library books; the U.G.C. also contributed significantly to the essential building programmes, wholly or on sharing basis. However, the recurring expenditure on teaching and other posts that were provided, has now become a charge on the non-plan expenditure on the expiry of the stipulated periods of assistance.

For the purpose of this analysis, the University Departments have been divided into two broad categories (1) The Laboratory-based Departments and (2) Non-Laboratory-based Departments.

Table I and *Table II* provide the figures of actual expenditure incurred (with percentage indicated) for the three years (1980-81 to 1982-83) on the staff salaries, provisions for research made in response to the yearly demands of the Departments in the university's budget and the expenditure on other items like contingencies and the like.

From these figures, it transpires that the Laboratory-based Departments spend between 77.97% to 80.51% on staff salaries and 19% to 22% on research programmes and other activities taken together. In the Non-Laboratory-based Departments the proportion of expenditure on staff salaries is higher. It ranges from 90.69% to 92.02%, whereas the provisions for research are almost negligible, with other things claiming a small fraction of the total expenditure in these Departments. To a very considerable extent their research needs are met by the provisions made for the purchase of books and learned journals in the University Library from year to year, apart from the substantial plan allocations for the purpose. The Laboratory-based Departments too partake of these facilities, and perhaps to a greater extent. The lumpsum amount provided for the purchase of books and learned journals in the University's Library for the three years was as follows:

(a) For Books

1980-81	..	Rs. 1,97,165
1981-82	..	Rs. 2,44,375
1982-83	..	Rs. 2,49,389

(b) For Learned Journals

1980-81	..	Rs. 11,52,114
1981-82	..	Rs. 11,45,402
1982-83	..	Rs. 12,67,402

The learned journals are subscribed to and books are purchased in consultation with the faculty and in the case of the former i.e. journals particularly, the lion's share goes to the Science Departments.

The percentage of expenditure on the salaries in both these types of Departments has galloped further because since April, 1983, as many as five additional instalments of dearness allowance etc. have been sanctioned and out of these two have also been paid to the higher-salary slab faculty members and other staff. It may be pertinent to mention that of the total expenditure on staff salaries in these departments, the non-teaching staff doing administrative work consumes only a very small fraction of it. *Table III* (on page 4) provides the break-up of the salaries paid to different categories of the members of the staff in 5 big Laboratory-based Departments and 4 big Departments representing Social Sciences and Humanities etc. This break-up is given to dispel the general impression that the expenditure on the administrative staff even in the teaching departments is quite a considerable drain on the already inadequate resources available to them. The administrative staff at least to some extent, is responsible for providing support facilities, making things smooth for the faculty to accomplish their tasks.

If the number of students in the departments, which were taken up for this analysis, is taken into account as the major beneficiaries of the books purchased in these years—keeping the faculty and research scholars aside—then for 4200 odd students in these departments, the university has been spend-

TABLE I

Actuals of Expenditure for the Years 1980-81, 81-82 and 82-83 on Staff Salaries, Research Provisions and other Items etc.

Laboratory Based Departments

		Percentage of Expenditure on		
Year	Total Actual Expenditure Rs.	Salaries	New Provisions For Research Programmes.	Expenditure on other Items Like Contingencies and the Like.
1980-81	11074952	77.97	3.70	18.33
1981-82	13001385	80.02	3.32	16.66
1982-83	15753651	80.51	3.20	16.29

TABLE II

Non-Laboratory Based Departments

1980-81	9329012	90.69	0.36	8.95
1981-82	10919239	90.89	0.35	8.76
1982-83	12734918	92.02	0.50	7.48

ing from its own resources between Rs. 40.50 to Rs. 50.97 for the books per student.

Similarly, if the number of the faculty members and Research Scholars and Research Fellows is considered as the persons primarily using the learned journals, particularly, foreign ones, which cost enormously, then with 660 odd faculty members and researchers etc. the cost per head on this score is indicated by the following figures:

1980-81	..	Rs 1748
1981-82	..	Rs. 1735
1982-83	..	Rs. 1909

And when the yearly financial assistance provided to the faculty for attending national and international conferences and seminars etc. is taken into account (at least some of these visits are more personal and social in their impact), then the expenditure per head on research programmes of the faculty acquires some additional glow.

It must be admitted here that both the presumptions for working out this cost factor are neither wholly fair nor just to the students, teachers or researchers. This has been only done with a view to strengthening the fact that the University can hardly spare anything substantial for things which are so vital for its adequate functioning.

The University's annual expenditure on the conduct of examinations and evaluation processes is around Rs. 80 lacs. Taking into account the total number of students who had been appearing in the various examinations, the cost per student works out to be a little more than Rs. 56. This does not include the expenditure on the salaries of the staff doing the examination and other connected work, which comes to a total of Rs. 28,32,683 per annum. And when a part of this is apportioned to the examination work, this cost figure would go up significantly. But the average of the examination fee charged from the students taking various university examinations comes to about Rs. 40 only. An attempt once made to raise this fee by a paltry amount of Rs. 2 or Rs. 3 generated good deal of hullaballo in the decision-making organs, and the move had to be dropped. The need to rationalise this fee-structure hardly requires any emphasis.

However, expansion of the 'salary-component' appears to be an endless phenomenon and at times this curve shoots up very sharply. For example, when we take the year 1980-81 as base year, the percentage of increase in this provision alone in the succeeding two years is very striking. This is evidenced by the figures provided in *Table IV.* (on page 5) A department-wise break-up as given in *Table V* (on page 6) further strengthens this trend, while the provisions for research and allied activities in some cases had gone down, even though marginally.

In the Laboratory-based Departments, the number of seats are, more or less, fixed and the admissions go by merit, with some reservations for students from the weaker sections etc. In these departments, therefore, the cost per student understandably is on the higher side as compared to the Non-Laboratory-based Departments with the exception of a few as is shown in *Table VI.* (on page 7) Even among some of the Laboratory-based Departments, for example, in the Department of Microbiology, this cost is double, and even more, than in the other like Departments. This discipline comparatively speaking was instituted somewhat later and as such was given more non-plan funds for acquiring equipment and for additional staff positions. It did get for sometimes what may be called a 'favoured-department-treatment'. In the Non-Laboratory-based Departments, the cost variations are even more marked, particularly in the case of those departments where the enrolment is small, like the Department of Gandhian Studies, the Department of Fine Arts and the Department of Indian Theatre. But somewhat higher cost per student in these departments can well be justified on the basis that it

TABLE III

Break up of Expenditure Incurred on Salaries on the Academic, Lab./Tech. & Non-Teaching Staff from the year 1980-81 to 1982-83

S. No.	Name of Deptt.	Percentage of Expenditure Incurred on Salaries During the years 1980-81			1981-82			1982-83		
		Academic Staff	Lab/ Tech Staff	Non-Teaching	Academic Staff	Lab/ Tech Staff	Non-Teaching	Academic staff	Lab/ Tech Staff	Non-Teaching
	LAB. BASED DEPTTS.									
1.	Chemistry & SAP Chemistry	66.73	24.35	8.92	67.08	23.17	9.75	68.96	22.14	8.90
2.	Physics	50.86	39.25	9.89	56.97	34.04	8.99	60.66	30.04	9.30
3.	Geology & CAS Geology	56.78	25.31	17.91	61.79	21.61	16.60	65.48	19.48	15.04
4.	Zoology	64.69	22.36	12.95	64.22	21.96	13.82	64.40	22.36	13.24
5.	Chemical Engg. & Tech. including Dev. 5. Courses	61.38	29.56	9.06	58.43	31.62	9.95	63.35	28.18	8.47
	NON-LAB. BASED DEPTTS.									
1.	English	90.83	—	9.17	89.10	—	10.90	91.84	—	8.16
2.	Pol. Science	89.05	—	10.95	88.50	—	11.50	88.45	—	11.55
3.	History	86.55	—	13.45	86.62	—	13.38	88.44	—	11.56
4.	Economics	84.65	—	15.35	85.68	—	14.32	82.90	—	17.10

TABLE IV

Percentage of Increase in Expenditure on Salaries, Research and other Items between 1980-81 on one hand and 1981-82 & 1982-83 on the other

Name of Deptt. Budget Head	Expenditure for the years			% Increase	
	1980-81	1981-82	1982-83	1981-82	1982-83
	Rs.	Rs.	Rs.		
A. LAB. BASED DEPTTS.					
Salaries	8635534	10403866	12683226	20.47*	46.87**
Research	410017	431815	504978	5.31	23.16
Other Exp.	2029401	2165704	2565447	6.71	26.41
Total Lab. Based Deptts.	11074952	13001385	15753651	17.39	42.24
B. NON-LAB. BASED DEPTTS.					
Salaries	8460920	9924319	11718054	17.29	38.49
Research	33126	37781	63431	14.05	91.48
Other Exp.	834966	957139	953433	14.63	14.19
Total Non-Lab. Based Deptts.	9329012	10919239	12734918	17.04	36.50
Total 'A' & 'B'	20403964	23920624	28488569	17.23	39.62

*The increase of 20.47% in the salaries is due to the revision of Pay Scales of non-teaching staff up to rank of Superintendents as also the V plan liability.

**The galloping jump again of 46.87% is due to the release of as many as five instalments of A.D.A., increase in the rate of Chandigarh Compensatory Allowance and the sanction of A.D.A., as one time exception to the high salary lab staff.

is one of the important functions of a university to improve the quality of life around it, to enrich the value system of the society and to make substantial contributions for the promotion of art and culture.

In terms of the total inputs, the university's attainments in productivity, efficiency and economy does provide a sense of satisfaction. The community that sustains it has a right to expect that the university is adequately discharging its functions. It has well been accepted that it is one of a few universities in the country which is functioning, more or less, smoothly and where each academic year begins and ends with all essential programmes of teaching and examinations completed on schedule. However, if on this score or for any other reasons, a sense of complacency is allowed to pervade and spread, then it will not be something in the interest of the sound health of the university as such. Already in certain respects things are not shaping as it ought to be, and in some cases even a disturbing downward descent has been discerned. This has understandably caused legitimate concern in responsible decision-making quarters. The University's non-plan expenditure has gone up from Rs. 2,01,33,554 to Rs. 4,19,01,509 from the years 1975-66 to 1982-83, a rise of more than 108.11% as is revealed by the figures given in *Table VII* (on page 7). But the performance particularly of a sizeable section of the younger members of its faculty and its researchers during this period had been to some extent dismaying. This is being said on the basis that the university drew a complete blank in the matter of winning even one "Young Scientist" award during the last 5 or 6 years in succession. Recently, in a competitive examination for about 100 C.S.I.R. fellowships, not even one from among its 'top-merit' students/scholars could win the fellowship. In an analysis recently made by the U.G.C. it was regrettably revealed that an M.Phil. scholar of the University with 80% marks or so to his credit was not able to come up to the level of 20% marks in a competitive test. True, that an isolated example cannot be picked up to project some general conclusions. But it is a symptom of a spreading malaise and it would not be prudent to ignore what it tends to point out. As another indication of the way many of us take up our assignments, it may be somewhat relevant and appropriate to mention that a couple of years ago the University took the initiative and to begin with provided a small amount for research work for the teachers in the colleges affiliated to it. This amount was subsequently raised from Rs. 10,000 to Rs. 20,000. But it was so disappointing to note that even this paltry provision was hardly availed of by any of the college teachers. A year or so back a Principal of a college undertook 'study-project' and asked for some financial assistance which was readily given to him out of this budget head. The report and results of this study are, of course, being hopefully awaited.

This analysis, as was stated at the outset, had been made on the basis of some limited criterion. The huge amounts that have gone into the construction cost of the buildings and other important capital expenditure, the substantial provisions for various support services and the heavy expenditure on university administrative set-up which functions largely for the students as such, if all these are taken into consideration after exhaustive analysis, then the efficiency and cost effectiveness as also the unit cost could be correctly gauged.

It is realised that the attempt made in the preceding paragraphs does suffer from many a deficiency and some of the presumptions are perhaps

TABLE V

Departmentwise increase in expenditure on Salaries, Research and other Items

Name of Deptt.	Budget Head	Expenditure for the Years			Increase on the Basis of 1980-81		% Increase	
		1980-81 Rs.	1981-82 Rs.	1982-83 Rs.	1981-82 Rs.	1982-83 Rs.	1981-82	1982-83
1. Bio-Physics								
	Salaries	473347	587772	647343	114425	173996	24.17	36.75
	Research	41967	41094	48500	(−)873	6533	(−)2.08	15.56
	Other Exp.	99484	108522	96617	9038	(−)2867	9.08	(−)2.88
	Total Exp.	614798	737388	792460	122590	177662	19.93	28.89
2. Microbiology								
	Salaries	510515	652152	760524	141637	250009	27.74	48.97
	Research	64851	62847	70000	(−)2004	5149	(−)3.09	7.93
	Other Exp.	142524	136166	349519	(−)6358	206995	(−)4.46	145.23
	Total Exp.	717890	851165	1180043	133275	462153	18.56	64.37
3. Chemistry								
	Salaries	1202597	1470459	1696052	267862	493455	22.27	41.03
	Research	29502	35000	49500	5498	19998	18.63	67.78
	Other Exp.	481538	526671	569637	45133	88099	9.37	18.29
	Total Exp.	1713637	2032130	2315189	318493	601552	18.58	35.10
4. Physics								
	Salaries	1018910	1321286	1599078	302376	580168	29.67	56.94
	Research	33665	35000	22328	1335	(−)11337	3.96	(−)33.67
	Other Exp.	418991	345896	373103	(—)73095	(—)45888	(—)17.44	(—)10.95
	Total Exp.	1471566	1702182	1994509	230616	522943	15.67	35.53
5. Maths								
	Salaries	406166	472154	505150	65988	98984	16.24	24.37
	Other Exp.	9876	30933	6000	21057	(—)3876	213.21	(—)39.24
	Total Exp.	416042	503087	511150	87045	95108	20.92	22.86
6. Commerce & Business Management								
	Salaries	965202	1030387	1236643	65185	271441	6.75	28.12
	Consulting Facilities	1200	3465	6413	2265	5213	188.75	434.42
	Other Exp.	126946	150933	170286	23987	43340	18.90	34.14
	Total Exp.	1093348	1184785	1413342	91437	319994	8.36	29.27
7. Economics								
	Salaries	370142	475079	471317	104937	101175	28.35	27.33
	Educational Tours	1500	—	1500	(—)1500	—	(—)100.00	—
	Others	34896	34178	31465	(—)718	(—)3431	(—)2.06	(—)9.42
	Total :	406538	509257	504282	102719	97744	25.26	24.04
8. English								
	Salaries	390680	433531	503142	42851	112462	10.96	28.78
	Others	13894	15500	19075	1606	5181	11.56	37.28
	Total :	404574	449031	522217	44457	117643	10.98	29.07
9. Geography								
	Salaries	366928	400104	510121	33176	143193	9.04	39.02
	Field Grant	3000	4000	4000	1000	1000	33.33	33.33
	Others	17609	18497	14238	888	(−)3371	5.04	(−)19.14
	Total :	387537	422601	528359	35064	140822	9.04	36.33
10. Political Science								
	Salaries	209711	268737	349271	59026	139560	28.14	66.54
	Others	6765	11480	13000	4715	6235	69.69	92.16
	Total	216476	280217	362271	63741	145795	29.44	67.34

TABLE VI

Total Number of Students Enrolled in the University Teaching Departments from the Year 1980-81 to 1982-83 and Annual cost per Student

Name of Deptt.	Number of Students			Annual cost per Student		
	1980-81	1981-82	1982-83	1980-81	1981-82	1982-83
				Rs.	Rs.	Rs.
LAB. BASED DEPTT.						
1. Anthropology	60	73	94	7835	7069	6282
2. Bio-Chemistry	53	60	64	9049	9800	11122
3. Bio-Physics	56	71	63	10978	10386	12579
4. Microbiology	39	43	44	18407	19795	26819
5. Botany	154	133	134	7768	10701	12738
6. Chemistry	174	149	139	10769	14532	18139
7. Geology	80	75	70	11084	15552	20887
8. Pharmaceutical Sciences	93	104	104	9544	11242	14332
9. Physics	97	111	126	15171	15335	15829
10. Zoology	103	107	91	7854	8699	11958
NON-LAB. BASED DEPTT.						
1. Mathematics	144	157	151	6565	7617	8612
2. Statistics	47	42	42	6273	8687	10977
3. Commerce & Business Mgt.	150	173	157	7289	6848	9002
4. Economics	157	150	147	2589	3395	3430
5. English	263	247	243	1538	1818	2149
6. Fine Arts	34	28	30	7598	9455	11231
7. Gandhian Studies	10	11	10	9040	8810	11971
8. Geography	79	83	77	4906	5092	6862
9. Hindi	131	131	131	1331	1691	2259
10. History	131	130	128	1596	1802	2183
11. Indian Theatre	10	14	09	22301	17439	31720
12. Punjabi	62	64	75	2739	2966	3811
13. Phy. Education	45	40	32	14860	19910	19327
14. Pol. Science	95	97	91	2279	2889	3981
15. Pub. Admn	68	69	73	2677	3255	3584
16. Sociology	97	68	81	2558	4567	4576

contrary to the over-all functions of an academic infrastructure; still it is indicative of some of the reasons which hamper the university in the performance of its major functions adequately. Whatever research programmes are being pursued, these are substantially supported by the U.G.C. under the five-year plan schemes. It also provides financial assistance for a sizeable number of projects out-side the plan allocations. The research programmes in the Science Departments also get considerable support from some of the national institutes like the C.S.I.R., I.N.S.A., I.C.S.S.R. and the like. Similarly, Government of India's Department of Science and Technology is coming in a big way to assist worthwhile research undertakings in the University.

It may perhaps be useful if an attempt is undertaken to make a comparative study of about six or seven major universities in the country, covering the different regions and an analysis is made of the trends of their expenditure etc. But such an effort could only be undertaken as a collaborative measure and with adequate support from the U.G.C.

TABLE VII

Non-Plan Expenditure Incurred on salaries from 1975-76 to 1982-83 and %age Increase on the Basis of 1975-76

Year	Expenditure	Increase on the Basis of Expenditure in 1975-76	% Increase on the Basis of 1975-76
	Rs.	Rs.	
1975-76	2,01,33,554	—	—
1976-77	2,20,89,336	19,55,782	9.71
1977-78	2,46,79,543	45,45,989	22.57
1978-79	2,64,54,179	63,20,625	31.39
1979-80	2,76,64,686	75,31,132	37.40
1980-81	3,49,79.310	1,48,45,756	73.73
1981-82	3,86,80,696	1,85,47,142	92.12
1982-83	4,19,01,509	2,17,67,955	108.11

Shri Singh Addresses Convocation of Magadh University

Excerpts from the convocation address delivered by Shri L.P. Singh, former Governor of Assam and other North Eastern States, at the Magadh University, Bodh Gaya.

"The Magadh University has done me great honour by inviting me to address this Convocation; and for reasons, which I shall presently mention, it is not for me just a formal, ceremonial occasion, but one evocative of deep emotion. It was in Gaya that in 1936 I started my life as a public servant, and the most inspiring and memorable week of my early service life was spent at Bodh Gaya itself. That was the week in January 1937 I spent here as Presiding Officer during the Provincial Assembly elections. I had the rare opportunity of spending my mornings and evenings wandering in and around Bodh-Gaya and reflecting upon the Light that, originating under the Bodhi tree, had illumined not only our own country, but a large part of rest of Asia. And on the greatness and glory of Magadha over many centuries. It was in Magadha that the awareness of the country's physical unity and the collective consciousness of Indianness were translated into political reality, and developed through successive empires, starting in the sixth century before the beginning of the Christian era, and more than once attaining the zenith of greatness. It was in Magadha that a well organised administrative system, strong but just, humane and compassionate, was built up. It was here, that an emperor abjured war and chose the path of non-violence and human brotherhood, and instead of extension of territory worked for the extension of Dharma and conversion of people to a moral way of life. The remarkable political advance was matched by intellectual and cultural achievements, and, in course of time, it was at Nalanda in the heart of Magadha, that there came into existence for several hundred years, an intellectual centre to which scholars and students came from many countries to acquire knowledge and moral wisdom. It was here that Bramhanical religious ritualism, cramping social restrictions and the growing rigidities of the caste system, with all the attendant evils, were successfully challenged by the universalist religious and ethical contents of Buddhism and also to some extent by Jainism. As one reflected on Magadha's many-sided splendour and its tremendous contribution to the country, one had a vision of Bihar regaining its pristine glory and once again contributing to the strength and unity of India, and to the intellectual, cultural and moral enrichment of the Indian people. This vision, enlarged by thoughts of what other parts of Bihar had achieved in the ancient past, in Mithila and Anga, and what, centuries later Sher Shah with his base at Sasaram had added to the earlier legacy, was a source of inspiration to many of us working in Bihar during the years following Independence. There was also the proud consciousness of Bihar's part in the struggle for freedom from British rule, first during the middle years of the 19th century, when in addition to others a major insurrection was so valiantly led by Koer Singh; and then in the 1921 non-cooperation movement about which Gandhiji himself had said: "Bihar is a province which has kept most non-violent. It has shown splendid results in most items of non-cooperation.. It contains both among its Hindus and Musalmans, probably the most selfless workers throughout India who work silently and without bragging. No one has uttered a whisper about the sincerity of its leaders..." Finally, fresh in mind was the glorious part played by Bihar during the Quit India movement of 1942-43 when here, more than anywhere else, the upsurge was such as to shake the foundations of British administration, and in which some hundred Bihari patriots sacrificed their lives. Your Vice-Chancellor who was a fellow civil servant during those years of unbounded aspirations and creative urges,—and of hope and faith in the great destiny of Bihar—will bear out my statements. The vision remains, shared, I believe, even today by millions of our people; and though weakened and clouded by the sad experience of recent years, still capable of inspiring high endeavour, and achievement. It is difficult to accept that having made such great contribution in the spheres of religion, philosophy, culture and civilization, and to the evolution of Indian polity, Bihar has a sterile future. ...

"The simple truth is that instead of making a major contribution to the well being and progress of country our failures in many spheres, and our mutual bickerings and social discords, often ending in violence, our widely fractured society, and our cultural backwardness, have, stood in the way of the progress of the country. Our critics, in fact, say that along with a few other states, we have been a drag on the advancement of the country. With our size and population, our situation in the heartland of India, our natural endowments, agricultural and mineral, and the talents and grit of our people, we could have played, by our performance and example, a crucial role in the affairs of the country—for good if we had done well; as it is our failures have had the opposite effect.

"Lest my criticism is considered too sweeping a generalization I mention some basic facts. Though Bihar started with many handicaps the growth of its per capita income during the fifties was quite satisfactory, registering an annual compound growth rate of 3.95% as compared to the all-India growth rate of 3.30%. But in the sixties the growth was extremely sluggish, only partly because of the severe drought of 1967-68; it was a merely 0.68% compared to the all.India figure of 3.17%. With some interruption, the growth rate picked up in the seventies reaching 2.99%; but it was substantially lower than the all-India rate of 3.50%. The last year for which the figures of Net Domestic Product are available to me is 1980-81. They show that Bihar's per capita income (at current prices) was only Rs. 870, as compared to the all-India figure of Rs. 1571; and what is more significant, it was the lowest among all the 22 states in the country. These figures reflect the relatively low plan investment, combined with unrestricted growth of population; the percentage of plan investment in Bihar to the total plan investment in all the states has come down from 8.5% in the second Five Year Plan to 6.5% in the current Plan. In the country as a whole, the proportion of population below the poverty line is around 48%; in Bihar it is around 57.5%, being the highest in the country, with the exception only of Orissa. In other words, practically three out of every five Biharis are in the grip of poverty, classified nationally as such. It is a reflection of this degree of poverty that in the last year for which information is available domestic consumption of electricity per capita in Bihar was the lowest in the country, being only 1.8. Kwh. compared to the all-India figure of 14.1 Kwh. The total consumption of power too was low, being 85 Kwh per capita, as against the all-India figure of 143 Kwh showing also a low rate of increase over a period of twenty years, and reflecting sluggish economic activity. Indeed Bihar's abysmal poverty is too evident to require detailed statistical confirmation. Our capital itself provides eloquent evidence of our people's crushing poverty. Pataliputra which was the capital of India for about a thousand years, with its splendour leaving foreign visitors wonderstruck, is now choked with some 50 thousand cycle-rickshaws; perhaps every tenth person residing in the capital is forced to earn a poor livelihood by such health destroying labour. One sees hordes of poverty stricken people from Bihar seeking the bearest subsistence in North-eastern India, and living in most squalid conditions; one sees them in and around Delhi, and in the North-western states. So Bengal is now not the sole outlet for our impoverished population, as it used to be in the past. One wonders why with all our professed commitment to rapid economic development and social progress, Bihar remains such a vast bottomless trough of poverty, with its hordes of the poor spreading out far and wide. Further, it is not only the uneducated poor for whom Bihar is unable to find work; according to the Live Registers of Employment Exchanges, there were over eight lakh matriculate job-seekers in Bihar in 1981—much the highest number among the states. And one is entitled to ask what prospects are there of this state of affairs ending even by the end of the present century. None, unless in certain critically important spheres, there is a great acceleration of pace of progress.

"Let us begin with the demographic facts. We have not only the second largest population, but, also the highest density, after Kerala and West Bengal, both of which being much more urbanised, have a far larger proportion of workers in non-agricultural sectors. What is, however, far more disturbing is that our population grew during the decade 1971-81 at a higher rate than during the preceding decade, reflecting poor performance in family planning. The decadal growth rate in the country as a whole increased in 1971-81 by only 20% while in Bihar it rose by 2.73%. Not only the country as a whole but 13 out of 22 states showed a lower rate of growth—conspicuous among them the two more densely populated states of Kerala and West Bengal

"In early fifties, the then Chief Minister, Srikrishna Sinha, asked the agonised question: What had happened to his dream of the twenties, of Independence ushering Ram Rajya—a regime of universal happiness and prosperity—which when shared with his audiences used to bring a gleam in their eyes. One could answer simply that more than anything else it was ten and a half million people added to Bihar's population of 1921, who had stood between his dream and the harsh reality. And since then another 31 million have swelled Bihar's impoverished humanity. It is the result of a high birth rate, being 39.1 per thousand of population as compared to 33.3 for the country as a whole; and this is explained by our relatively poor achievement in family planning. As on 1st April 1983, the national figure of couple protection was 25.9%; the figure in Bihar was only 13.7%—the second lowest in the country. And when in 1982-83 Bihar registered a satisfactory rate of sterilization, the evaluation teams which visited the state found the performance to be qualitatively poor and the figures therefore unreliable! Political statistics are no answer to live social problems. It is evident that unless we substantially accelerate the pace of family planning without sacrificing quality, our poverty will not only abide with us but will get further aggravated. We have to recognize this to be our crucial problem, and to act with a sense of urgency.

"Education is the underpinning of the future. It is a major factor in economic growth and in the functioning of a democratic political system; and it influences norms of conduct, particularly in a society undergoing social change. Let us therefore look at the picture of literacy, with which all education starts. At the 1981 census the all-India effective literacy rate was 29.45% the figure for Bihar was just 19.94%. Only one state and a Union Territory had a lower figure; moreover while Bihar had the 25th rank in literacy at the 1971 census, it had come down to the 27th rank in 1981. Thus, instead of making up for our backwardness by a quicker progress, we had shown relative regression. The story of female literacy—which in some ways, for instance in birth control, is even more important—is similar: in 1981 it was 13.58% as compared to the all-India figure of 24.88%, and we had the same 27th rank among 29 political units in the country. So in our state four persons in five, and seven females in eight have remained illiterate even after all these years since Independence.

"Numerous other socio-economic indications of slow progress and, in some cases, even of stagnation are available, such as those of agricultural production and productivity, (with the exception of one or two crops), fertilizer consumption, etc. But it would not be appropriate to load this address with statistics any further. I would only add that in the vital field of health services, the facilities in Bihar are among the poorest in the country; in 1982, there were only 32 hospital beds per lakh of population in Bihar—the lowest among the states—when the all-India average was 70 . . .

"Every part of the country has some more or less serious problems and suffers from one malaise or another. But where else have we got such a combination of debilitating factors, economic and social? And on trends so far including deceleration of plan investment, relative to other parts of the country, and failure to deal resolutely with our demographic problems, what chances are there of an early alleviation of the situation? How long shall we reconcile ourselves to being at the bottom in all that makes for economic and social progress and the well-being of our people, and at the top in crimes and violence? We have to realize that economic growth is a cement of mass democracy and of a cruelly impoverished society . . .

"My working life in Bihar ended about 28 years ago, and though disconcerting questions about Bihar affairs are still put to me by people from other parts of the country it would be wholly presumptuous for me to offer any advice to the Bihar Government and administration about the way the enormous challenging tasks facing the state ought to be dealt with. In the ultimate analysis, it is the norms and values of a society, and the goals it seeks to achieve, that shape the character of its government and determine the performance of its administration. And in a democracy the sort of individuals the citizens elect to the legislature, and the considerations on which they make their choice are of fundamental importance. If, for instance, some persons with criminal records are elected to the legislature, and caste and communal considerations determine the pattern of voting, it may be difficult for any branch of government to function with a high sense of purpose, and a broad outlook, serving fairly and efficiently the interest of the entire society. It is in moulding the values and standards of society that our universities could—in fact they alone can—play a decisive role. It is the young persons passing out of universities. who will be leaders in all spheres of life; and it is they as teachers in schools, who wlll largely shape receptive young minds. If centres of higher education become arenas of virulent conflict between one section of society and another, if teachers are divided not on high academic issues, but in pursuit of sectional interests, and power and if teaching and examinations are interrupted by outbreaks of violence, can one expect wise and orderly conduct of public affairs and observance of decorum and restraint in social relationships, generally?

"In making these observations I am not suggesting that forces at work in society, with strains and stresses inescapable in a period of social and cultural change, can be halted at the portals of a university. Nor that a university can remain, inspite of the vastly changed conditions, the preserve of the social or even the intellectual elite. With the widening stream of primary and secondary education, an increasing number of students from the remotest rural areas and the economically or socially underprivileged classes have been entering the universities and the flow will continue and go on widening. All of us who believe in equality of social status and economic opportunities should welcome this, and understand the urges behind it. We have also to recognize that in a democratic society the old concept of discipline, with an authoritarian element, has necessarily to change. In a free society there are bound to be differences, and even conflict of interests. However, one can reasonably ask that even in the passions that these may arouse students, as custodians of the future, would not permit themselves to deviate from standards of civilized behaviour, or fail even temporarily, to respect human values. Obviously, the members of the University Faculties have a great responsibility in this matter; by example as well as precept they can guide the students along the right path. It is the responsibility of a university not just to mirror a society at large, but to mould it; to refine its standards to moderate its ascerbities and generally to function as a civilizing agency. It is only in universities where various streams of knowledge join; knowledge of historical experience, and current trends, and world affairs, of science and technology; of social and economic problems; of humanities, religion, philosophy and ethics. They are therefore in a position to promote in society, primarily through the knowledge and wisdom they impart to their students, a balanced outlook, and the right values and standards. May I incidentally mention that as one looks at the national scene one notices that wherever the centres of higher education have functioned peacefully and maintained standards, there has been economic and social progress...." ☐

Rai Krishnadas Memorial Lectures at BHU

Bharat Kala Bhawan Instituted the Rai Krishna Das Memorial Lecture series from the year 1981-82 to pay homage to Late Sri Raikrishnadas, the founder of this national and Internationally famous museum. The first Lecture of this series was delivered by eminent art historian Karl J. Khandalawala. The second lecture of this series was delivered by Dr. (Smt.) Kapila Vatsyayan, Additional Secretary, Dept. of Culture, Govt. of India, who considers herself as a pupil of Raikrishnadas who opened up her eyes to appreciate the beauties of Indian Art.

The first lecture of Dr. (Smt.) Vatsyayan was mainly concentrated in paying a tribute and homage to Rai Sahib. Analysing Rai Sahib's contribution in the field of Hindi literature, music and Indian Art, she said Rai Krishnadas was the second person after Coomarswamy who interpreted the message of Indian Art in India and abroad. She also painfully noted the defective methodology adopted in various institutions in teaching Art history and she was emphasising the holistic approach of Indian Art from the point of view of music, dance, drama and visual art.

Her second lecture was divided into two parts. In the first part she delivered her lecture with colour slides and drew the attention of the audience to the elements in a painting. The art historian, she said, knowingly or unknowingly, were indifferent as a result of which most of the books of Art history gave a particular analysis. In fact the sociological analysis of Indian paintings has not so far been considered, the way it should have been, she said.

In her second part of lecture she spoke about the text of Gita Govind and discussed the philosophical as well as the mysticism of Gita Govind, which poet Jaya Dev so lucidly described. She also discussed how the relation of devotee and his God are inter related some times with human feelings and at times with spiritual relations.

On 3rd and 4th March Smt. Pupul Jayakar, Advisor, Union Ministry of Commerce, was invited to deliver the 3rd Rai Krishnadas memorial lecture of 1983-84. In her first lecture she discussed the "Circle and the Triangles Insight and skill in the Indian Craft tradition". In this illustrated talk she discussed the nature of Indian tribal and folk art and she also reffered that the sophisticated art of the Hindu, Buddhist and Jain religion have all their roots in the art of the folk people in India.

Her second lecture was on "Crisis in Culture". In this lecture she was considering the crisis as well as dangers of not only Indian culture but she was anxious about the culture of the whole world. She expressed her deep concern about the moral and cultural degradation all over the world in spite of tremendous scientific and technical development. She referred that human mind did not develop in that way as it should have been. She also pointed out the basic drawbacks in our society and she warned if proper attention was not given to these social values and in case of certain human relations, the crisis in culture will deepen more and it will threaten the entire human existence.

Legal aid centre at University of Jammu

The University of Jammu has set up a Legal Aid Centre in the Department of Law. The objectives of the Legal Aid Centre shall be to:

(a) Undertake legal literacy programmes and to make use of the services of fifth and sixth term students of the LL B. course and part-time and whole-time teachers of the Department of Law for the purposes; (b) Enter into a working arrangement with a legal advisor approved by the Advisory Committee for the purposes of providing legal aid and advice to needy persons and providing expertise to the 3rd year (Vth and VIth terms) LL.B. students in the court process; (c) Render legal aid and advice to the needy persons in civil and criminal proceedings; and all other acts necessary or incidental to realisation of the above mentioned purposes.

The U.G.C. has provided financial assistance of Rs. 20,000 and the legal aid implementation committee of the Government of India has sanctioned an amount of Rs. 10,000 for the activities of the Legal Aid Clinic.

An Advisory Committee for the Legal Aid Centre has been set up. Dr. K.L. Bhatia, Reader in the Department of Law, has been nominated by the Vice-Chancellor to act as Director of the Centre.

Special courses at SNDT University

According to reports the SNDT Women's University plans to introduce teachers training courses in educating children whose sight and hearing were impaired and who had learning disabilties. Research programmes are also likely to begin shortly.

The University has plans for the starting of M.Ed and Ph.D. programmes in special education with various specialisations and stress would be laid on parent and community education to correct public misconceptions about the handicaps.

The composite one-year degree course for the above purpose will have an initial intake of 15 students. This will cover care of mentally retarded and physically handicapped children with cerebral palsy. Admissions to the course would be very strict. A specific set of criteria, apart from the interviews, to determine candidates' aptitude for this kind of work are being worked out.

Education to be free in M.P. schools

The Chief Minister of Madhya Pradesh, Shri Arjun Singh, announced in the State Assembly recently that Education upto the Higher Secondary level in both government and private aided schools will be free from the next academic session. In addition, girl students would not be charged tuition fees even at the collegiate level from July, 1984. Additional grants would be provided to the private schools by the State Government to compensate them for the loss of tuition fees.

About 5 lakh students are expected to be benefited by these two decisions. This may cost the exchequer about Rs. 1.6 crore per annum.

Madhya Pradesh is counted amongst the nine backward States in Education.

Taxila to be revived

Takshashila, 40 km northwest of Islamabad, is likely to be revived as a unique international centre of learning.

One of the world's great archaeological finds, Taxila is the place where Alexander the Great discussed philosophy with Buddhist ascetics in 326 B.C. Excavations made earlier in this century revealed the remains of three cities and dozens of monasteries built over 1000 years from 600 B.C. to 600 A.D.

Taxila, capital of various empires that flourished in this region, was the crossroads for trade routes connecting China, India, Central Asia and the West. The news reveal a clear sign of Taxila being a great seat of learning two millenniums ago. The university at Taxila, it is said, consisted of scattered schools at monasteries managed by eminent teachers and funded by donations. Taxila University probably existed upto eight Century A.D.

The project for revival has been broached with the UNESCO which has asked Pakistan for a detailed plan.

Training classes for supervisors of adult education at GV

Gujarat Vidyapith has been organising a series of training classes for Supervisors of Adult Education. The Vice-Chancellor, Prof. Ramlal Parikh addressed one of such classes on 7th April and stressed the need for systematic integration of programmes of population education, health education and employment, vocational education in adult literacy programme. He also stressed the need for more non-verbal literature as well as for more participatory programmes rather than traditional lecture methods.

In this 10-day training course the participants are given several self-study projects from which they have to fomulate their own papers which are discussed in the training course with greater emphasis and practical work and field observations than lectures.

A meeting of all voluntary agencies of Gujarat conducting Adult Literacy Programmes was also held to orient them about the urgency and new methods of adult literacy programmes. The Vice-Chancellor also addressed this gathering and stressed for qualitative improvement for methods and content of adult literacy.

New courses mark silver jubilee of OU's electronics department

The Department of Electronics and Communication of Osmania University is launching a series of programmes to commemorate its silver jubilee year during 1984-85. The highlight of the academic activities will be running of a summer school on military and cammunication applications of the spread spectrum. This will be thrown open to participants from all over the country.

There will be 20 participants from different research development organisations, IITs, Universities and P and T departments.

The programme for the silver jubilee include a national seminar on Micro Electronics and its Applications in January followed by an exhibition of all electronic equipment and systems manufactured in the Greater Hyderabad area.

Nuclear science centre at JNU

Mrs Sheila Kaul, Union Minister of State for Education, in a written reply to a question in the Lok Sabha recently stated that the University Grants Commission had approved a proposal to set up a Nuclear Science Centre in the university sector. The Centre, to be located at the Jawaharlal Nehru University, would be operated by a consortium of universities and institutes. The centre would provide facilities for research in certain areas of Physics, Chemistry, Biology, Medicine.

The estimated cost of the centre would be Rs. 2.66 crores in the Sixth Plan and Rs. 11.20 crores in the Seventh Plan.

New courses and department at Manipur Varsity

Manipur University will have three new Departments : Anthropology, Commerce and Earth Sciences in addition to the existing ten Departments. It is also proposed to open 11 one-year Post-Graduate Diploma Courses from the next academic session. They are: (i) Public Administration, (ii) Business Management, (iii) Teaching of English/English Studies, (iv) Banking, (v) Insurance, (vi) Educational Administration, (vii) Fishery, (viii) Electronics, (ix) Computer Programming, (x) Labour Laws and (xi) Biological Techniques. Besides, a six-week intensive certificate course will also be opened by the University during the summer vacations in French, German, Russian, Chinese and Sanskrit.

BHU plans for more adult education centres

The Centre for Auult and Continuing Education, Banaras Hindu Univeristy has reportedly imparted education to over 7,000 people during the last 3 years, according to Coordinator of the Centre, Dr. Y.N. Misra. At present they have 563 adult education centres with 848 instructors in 80 villages. During the current financial year 187 more centres are planned to be opened.

From this year the Centre has also started Shramik Vidyapeetha for people in industrial centres.

Valuable books for Jammu Varsity

The Chancellor of the University of Jammu has donated to the Library of the University of Jammu 347 valuable and rare books which will enrich the collection of the Library. Some of these books had been presented to Smt. Rameshwari Nehru, mother of Shri B.K. Nehru, and are autographed by the authors.

Sports complex in Bhagalpur Varsity

At an estimated cost of Rs. 25 lakhs a sports complex within the campus of the Bhagalpur University is to be constructed. The State Government has already sanctioned Rs. 17 lakhs for the project. Work on this complex is expected to start next month.

Further, more blocks for Language, Social Sciences and Humanities would be constructed at an estimated cost of Rs. 10 lakhs. The Boys hostel would also be constructed at a cost of Rs. 4.5 lakhs.

A separate complex for Gandhian Thoughts would also be constructed at a cost of Rs. one lakh.

News from Agril. Varsities

HAU project on mixed farming

Haryana Agricultural University has launched a unique research project on mixed farming in the Department of Agronomy.

According to Dr. M.S. Kairon, Professor & Head of the Department, the objective of this extensive project is to conduct integrated research on crop production, vegetable and fruit culture, agro-forestry, animal husbandry, buffaloes including Haryana buffaloes and cross-bred cows, sheep, goat, poultry and piggery and also subsidiary occupations such as bee keeping and fish farming. He said that the project is oriented towards developing the most remunerative farming system in relation to socio-economic conditions of the farmers and different agro-climatic regions of the State.

It is for the first time in the country that an integrated research on crop and milk production in conjunction with related enterprises such as poultry, piggery, fisheries and bee keeping has been taken up.

The project has special significance because though the Indian farmers in general and Haryanvi cultivators in particular have small land holdings and follow mixed farming, no systematic study to find out the ideal combination of crop and animal component has been conducted so far. Almost 60% of the farmers in Haryana have holdings between 1.25 to 2.50 hectares, 30% have below 1.25 hectares and only 10% have above 2.50 hectares. Hence, the focus of attention in this project is the average farmer of the state who has two hectares of land and generally follows mixed farming.

The programme is to be implemented with the financial assistance cf the State Govt. as well as the Indian Council of Agricultural Research (ICAR) in the three agro-climatic regions of the state, i.e at Hissar, Bawal and Ambala and will spread over the next five year plan.

At Hissar alone, 5 hectares of land has been kept aside for the rearing of animals and for cultivation of crops. In simulated conditions as prevalent in the villages, 3 buffaloes and 3 cross bred cows are being maintained at the research farm. The total cost on the project would be approximately Rs. 10 lakhs per year.

Stress is also proposed to be laid on the estiblishment of demonstration units on the farmers' fields, dissemination of technology on improved farming systems and training of farmers and extension workers in various systems of farming.

New reaper developed at PAU

The Department of Farm Power & Machinery of the Punjab Agricultural University has developed a tractor-drawn vertical conveying reaper for harvesting wheat and paddy crops. This machine is now being produced by about one dozen manufacturers and is being used by 200 farmers of the State during this season.

This reaper is a moderately priced compact design machine with considerable labour and money saving in harvesting operation. The machine cuts a width of 2.2m and it can harvest about eight acres a day. About eight persons can collect and bundle the crop thus giving a harvesting output of one acre per person.

A sub-committee of the Board of Management of the University headed by Dr. Sukhdev Singh, Vice-Chancellor saw the field demostration of the reaper and reviewed the progress made in the area of paddy transplanting, cotton picking and sugarcane harvesting mechanisation.

Red rot in Sugarcane in Kerala

The serious disease of sugarcane, red rot, has been recorded in an epidemic form for the first time in Kerala during 1983 monsoon period in the Pumpa River Factory zone. The disease was responsible for comptete destruction of sugarcane in vast areas of Kuttoor, Pandanadu, Eramallikkara and Valanjavattom. The organism responsible for the diseaese was isolated and found to be a very virulent strain of *Colletotriceum falcatum*. An evaluation trial for red rot resistance was taken up with 265 genotypes of sugarcane at the Sugarcane Research Station, Thiruvalla. A total of 65 resistant and 86 moderately resistant types were identified. Out of the commercial varieties released elsewhere in the country, Co. 7704, Co.740, Co.7717 and Co. 6907 were found to possess resistance against this strain of red rot fungus. The popular varieties of sugarcane how cultivated in Kerala, Co. 997 was found to be highly susceptible and Co. 62175 moderately susceptible. A high level meeting has recommended immediate replacement of the highly susceptible varieties with the resistant varieties like Co. 6907 and Co. 7704 which are suitable to the tract.

HAU to strengthen regional research stations

Haryana Agricultural University (HAU) has decided to strengthen research efforts on its regional research stations at Ambala, Karnal, Kaul, Gurgaon and Sirsa so as to cater to the research needs of different agro-climatic zones of Haryana. This was disclosed by Dr. R.P.S. Tyagi, Director of Research, HAU, recently.

It is expected that within the next four years Kaul, in Karnal district, will become one of the leading rice research stations of the country. Similarly, Sirsa is being developed as a station for efficient cotton based farming system. Bowal in Mahendragarh district is to strengthen researches on dry land farming, safe use of brakish water and use of limited canal waters. A useful programme of arid horticulture has already been developed at Bowal.

Karnal, which so far has been recognised as a sugarcane research station, is being developed as an important regional research station with sugarcane and water management as its leading functions. More researches on rainfed wheat, maize, pulses and oil seeds will be conducted at Ambala.

Gurgaon research station will cater to the existing and emerging problems of Gurgaon and Faridabad districts with particular reference to the existing socio-economic and agro-climatic problems of Mewat areas.

New research schemes at KAU

The College of Veterinary and Animal Sciences under the Kerala Agricultural University has undertaken a new research scheme in genetics with the assistance of I.C.A.R, New Delhi. Under the Scheme, indigenous rabbits will be cross bred with exotic species so as to improve the quality and quantity of meat obtained from them.

Another Scheme sanctioned by the I.C.A.R will study the reasons of infertility in cows. The study will focus attention on the genetic qualities of cows that are high milk yielders among the herd and also on stud bulls which could be used as a nucleus for herd improvement in the State.

The total cost of the schemes will be Rs. 7.5 lakhs.

Institute of Temperate Horticulture

The Union Minister for Agriculture, Rao Birendra Singh, told the Lok Sabha members recently that the Government of India was proposing to establish an Institute of Temperate Horticulture.

There was also a proposal to upgrade the Central Mango Research Station in Lucknow to the status of a fullfledged institute.

An office with a difference

The Kerala Agricultural University is constructing an innovative type of office-cum-dormitory for the Tribal Area Research Centre, Amboori. Its design is borrowed from the cottages of Kanikkar tribals inhabiting that area and is built by using materials like reed, bamboo and grass collected from the nearby forests.

For the construction of the cottage the local tribals are engaged and its total cost is estimated to Rs. 6000. The dormitory will help scientists stay at the Centre and work closely with the tribals.

IFFCO role lauded

Dr. K.S.Nandpuri, Director of Extension Education of the Punjab Agricultural University said that the Indian Farmers Fertilizers Co-operative Ltd. (IFFCO) had played a significant role in creating an awareness among the farmers about the scientific agriculture. He urged the IFFCO authorities to open more farmers service centres to educate the farmers about the profitable cultivation of vegetables and fruits apart from the cereals like wheat and paddy. Dr. Nandpuri thanked the IFFCO management for creating an IFFCO chair position of Professor of Agronomy at the PAU.

Dr. Nandpuri was inaugurating a two-day Kharif-1984 training programme for the salesmen of IFFCO Farmers' Service Centres of Punjab held at PAU recently. A large number of PAU experts apart from the officers of the IFFCO attended the function.

AIU News

Evaluation and Information Unit

The Evaluation and Information Unit of the AIU offers credential evaluation services and shares the extensive material and information on foreign education system with the Universities, faculty, students in India and abroad, government agencies and others. The Unit is assigned with the function of determination of equivalence and recognition of degrees/diplomas for purpose of admission to higher courses. This applies both to Indian qualifications and qualifications obtained from foreign countries. The AIU has been accepted by the universities and the government agencies as an accredited agency on assessment of academic credentials. The decision making power on recognition of qualifications at the highest level is vested in the Equivalence/Standing Committees of Vice-Chancellors. The AIU is also represented on the Board of Assessment for Educational Qualifications of the UPSC which decides recognition for employment purposes. The Evaluation and Information Unit is represented on the Inter-Ministerial Scholarship Committee which awards the scholarships to foreign students under Cultural Exchange Programme and various schemes of the Government of India.

The Unit works with close liaison with Indian Missions abroad and foreign Missions located in New Delhi. It provides useful information to the foreign students as well as students from various parts of the country on system of education, courses & facilities available at the universities and higher educational institutions, eligibility requirements and such other details. The Unit produces a series of Handbooks—Universities Handbook, Handbooks of Medical Education, Engineering Education, Management Education and Agricultural Education.

Enquiries may be addressed to: The Under Secretary (Evaluation & Information), Association of Indian Universities, AIU House, 16 Kotla Road, New Delhi 110 002.

CALENDAR OF EVENTS

Proposed dates of the Event	Title of the Conference/Seminar/Symposium/Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks
June 18-July 10, 1984	Seminar-cum-Workshop on the teaching of Professional English (National Level)	To enable the teacher participants (i) to understand the methodology of teaching English as a Foreign Language, English literature; (ii) to prepare teaching-cum-instructional material; (iii) to acquaint them with modern language laboratory techniques; and (iv) to improve their skills in English.	Department of English Studies, Dayal Bagh Educational Institute, Agra.	Dr. Darshan Dayal, Head	—
June 27-28, 1984	National Seminar on Integrated Information System for Socio-Economic Development.	To plan and achieve cooperation and integration in information processing and services	Society for Information Science, P.I.D. Bldg., Hillside Road, New Delhi	The Secretary of the Society	—
June 29-30, 1984	Third Marathi Sociological Conference	To promote teaching and research of Sociology in Marathi	Department of Sociology, Shivaji University, Kolhapur.	Dr. S.N. Pawar Director or Dr. B.B. Patil Organising Secretary.	—

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The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

SOCIAL SCIENCES

Library Science

1. Mishra, Daya Shanker. *Development of notation for library classification : A comparative and critical study of classification schemes*. BHU, Varanasi. Dr. S.N. Singh.

2. Mishra, Virendra Kumar. *Cataloguing of shared authorship : A comparative and critical account of the catalogue codes*. BHU, Varanasi. Dr. S.N. Singh.

Psychology

1. Agochiya, Devindra Pal. *A cross-cultural study of personality, values and altruistic behaviour of youth workers*. Pb U, Chandigarh. Dr. Jitendra Mohan.

2. Debe, Sheela. *The development of values among normals and delinquents*. BHU, Varanasi. Dr. M. Arora.

3. Gulati, Anita. *A comparative study of academic achievement in relation to personaliy, self-perception, adjustment and values*. Pb U, Chandigarh. Dr. Jitendra Mohan.

4. Harmeet Kaur. *A psychometric study of motivation of college and university students of Chandigarh*. Pb U, Chandigarh. Prof. O.P. Bagai and Dr. Jitendra Mohan.

5. Mehrotra, Prabodh. *Effect of education on psychological adjustment in rural societies*. BHU, Varanasi. Dr. M. S. L. Saxena and Dr. A.K. Srivastava.

6. Misra, Shyam Sunder. *A comparative study of normal and delinquents on some behavioural responses (Tent.)*. BHU, Varanasi. Dr. A.P. Shukla.

7. Pandey, Arvind Kumar. *Human experimental psychology*. BHU, Varanasi. Dr. C.B. Dwivedi.

8. Parmjit Kaur. *Standardization of personality questionnaire on Indian students*. Pb U, Chandigarh. Dr. Jitendra Mohan.

9. Singh, Chanebala. *Social attitudes and role execution in urban and rural societies. (Tentative)*. BHU, Varanasi. Dr. A.P. Singh.

10. Singh, Prabhat Kumar. *Occupational stress and coping strategies.* BHU, Varanasi. Dr. A.P. Singh.

11. Singh, Shiv Pujan. *Psychological correlates of organisational effectiveness*. BHU, Varanasi. Dr. A.K. Srivastava.

12. Thakur, Kashmir Singh. *Personality alienation, job anxiety, intelligence and some demographic variables of drug users among workers*. HPU, Simla. Dr. A.S. Sethi.

13. Yadav, Sheo Datt. *Psychological dimensions of organizational effectiveness (Tentative)*. BHU, Varanasi. Dr. A.P. Singh.

Sociology

1. Banerjee, Mitra. *Bengali family in Varanasi*. BHU, Varanasi. Dr. (Mrs.) Manju Biswas.

2. Dubey, Usha. *Social psychological factors in stress*. BHU, Varanasi. Dr. M.K. Chaturvedi.

3. Kaul, Autar Krishan. *Occupational structure of the population of the Kashmir Region: A spatial analysis*. Pb U, Chandigarh. Dr. K.L. Joshi.

4. Mehta, Ravi Ravinder Singh. *Impact of nationalized banks on rural development : A case study of three Panjab villages*. Pb U, Chandigarh. Dr. S.R. Mehta.

5. Singh, Om Prakash. *Psycho-social study of rural failure*. BHU, Varanasi. Prof. G.S. Nepali.

6. Tewari, Ranjana Rani. *A sociological study of working women*. BHU, Varanasi. Dr. J.K. Tewari.

Social Work

1. Agrahari, Purnima. *A comparative study of psycho-social aspects of leprosy present in urban and rural community of Varanasi*. BHU, Varanasi. Dr. K.P. Shukla.

Political Science

1. Das, Rashmi. *Development administration in Madhya Pradesh: A study in the theory and practice of development administration with special reference to Indore District from* 1956 *to* 1982. Devi Ahilya, Indore. Dr. J.A.L. Noah.

2. Goyal, Raju. *Secularism in modern Indian political thought*, 1885-1915. Pb U, Chandigarh. Dr. T.R. Sharma.

3. Janak Dulari. *Socio-economic basis of a regional party: A case study of Akali Dal in Panjab.* Pb U, Chandigarh. Dr. P.S. Verma.

4. John, K.S. *Political awareness among the elites of S.Cs and S.Ts in Krishna, and West Godavari District of Andhra Pradesh.* Devi Ahilya, Indore. Dr. J.A.L. Noah.

5. Madhurendra Kumar. *Super power rivalry in Indian ocean: A study of Indian interest.* BHU, Varanasi. Dr. R.R. Jha.

6. Pandey, A.K. *Agni Puran mein rajtantra.* BHU, Varanasi. Dr. T.N. Pant.

7. Parmar, Prakash. *Shrimati Gandhi ke netritva mein gut nirpeksh andolan: Sameekshatmak vivechan.* Devi Ahilya, Indore. Dr. Om Nagpal.

8. Parveen Kumar. *Role of committees in the legislative process: A comparative study of Assurances Committee of Panjab and Haryana.* Pb U, Chandigarh. Dr. T.R. Sharma.

9. Satish Kumar. *Bhartiya ranjniti mein Pandit Kamla Pati Tripathi kee bhoomika.* BHU, Varanasi. Dr. R.R. Jha.

10. Sharan, Deepak Kumar. *Aurobindo's political ideas.* BHU, Varanasi. Prof. M. Jha.

11. Singh, Vinod. *Non-aligned movement and the struggle for disarmament.* BHU, Varanasi. Dr. A.S. Mishra.

12. Srivastava, Manju. *Bharat mein pichhare huye vargon kee rajneeti: Uttar Pradesh ke vishesh sandarbh mein.* BHU, Varanasi. Dr. B.L. Garg.

13. Srivastava, Ravi Shankar. *Political culture and political development: A study of South Asian countries.* BHU, Varanasi. Dr. (Mrs.) Anjoo Sharma.

14. Srivastava, Savita. *India Sri Lanka relations after 1965.* BHU, Varanasi. Dr. (Mrs.) Anjoo Sharan Upadhyay.

15. Upadhyaya, Rama Kant. *United Nations and disarmament.* BHU, Varanasi. Dr. P.D. Kaushik.

Economics

1. Gupta, Rakesh Kumar. *Gandhian approach to balanced regional industrial development: A study in possibilities in Himachal Pradesh.* Pb U, Chandigarh. Dr. (Mrs.) R.S. Puri, and Dr. Romesh Pandey.

2. Jaiswal, Ravi. *International trade.* BHU, Varanasi. Dr. G.S. Kushwaha.

3. Mohammed Mehmood Ali. *Capacity utilization in engineering industry in Kolhapur City.* Shivaji U, Kolhapur. Dr. J.F. Patil.

4. Pandey, Gireesh Bhushan. *Agricultural economics.* BHU, Varanasi. Dr. M. Srivastava.

5. Pandey, Sudhakar. *International economics.* BHU, Varanasi. Dr. M.P. Singh.

6. Seth, Shishir Kumar. *Labour economics.* BHU, Varanasi. Dr. A.K. Jain.

7. Srivastava, Uma Shankar Sharan. *Agricultural economics.* BHU, Varanasi. Dr. R.P.L. Jain.

Law

1. Chatterji, Subhrangsu Shekhar. *Political offices in India and their control since independence.* BHU, Varanasi. Shri P.N. Banerjee.

2. Jaiswal, Birendra Kumar. *Legal culture in the Indian society.* BHU, Varanasi. Prof. R.K. Misra.

3. Jayaswal, Amit Kumar. *Agency by retification.* BHU, Varanasi. Shri, V.N. Singh.

4. Rai, Sheetala Prasad. *Examination of the law relating to offences by companies in the socio-economic context of India.* BHU, Varanasi. Shri Surendra Nath.

5. Singh, Tej Bahadur. *Civil and criminal liability corporations.* BHU, Varanasi. Shri V.N. Singh.

6. Tiwari, Jitendra. *Deduction and exemptions under the head profits and gains of business and profession.* BHU, Varanasi. Prof. M.C. Bijawat.

Commerce

1. Agarwal, Rajeev. *Trade credit management in Joint Stock Companies in India: A comparative study of public and private sector undertakings.* BHU, Varanasi. Dr. K.M. Pandey.

2. Agrawal, Deepak Kumar. *Personnel practices in Fertilizer Corporation of India with reference to Phulpur and Gorakhpur, Unit.* BHU, Varanasi. Prof. D.P.N. Singh.

3. Ajai Kumar. *Role of land development bank in agricultural development of U.P. from* 1951-1980. BHU, Varanasi. Dr. S.N. Ranade.

4. Dubey, Vishwanath Prasad. *Recruitment, selection training procedure in Shah Group of Industries, Varanasi.* BHU, Varanasi. Prof. S.N. Mehrotra.

5. Mishra, Ram Narayan. *Analysis of business of the Life Insurance Corporation of India.* BHU, Varanasi. Dr. M.N. Mishra.

6. Parida, Jayanta Kumar. *An evaluation of incentive schemes in a public sector steel plant: A case study of Rourkela Plant.* BHU, Varanasi. Prof. S.N. Mehrotra.

7. Paul, C. *An appraisal of integrated rural development programme in Mayoorbhanj District, Orissa.* BHU, Varanasi. Dr. S.N. Ranade.

8. Rai, Arvind Kishor. *Industrial relations in Indian Telephones Limited, Rai Bareilly.* BHU, Varanasi. Prof. S.N. Mehrotra.

9. Ramanathan, S. *Role of cost accountants in the economic development.* BHU, Varanasi. Prof. R.A. Singh.

10. Saikumar, V.L.V. *Weavers cooperative societies in A.P.* BHU, Varanasi. Dr. S.N. Sharma.

11. Sharma, Narayan. *Analysis of lapsation problems in the L.I.C.,* 1956-83. BHU, Varanasi. Dr. M.N. Mishra.

12. Singh, H.K. *Industrial relations*, BHU, Varanasi. Prof. S.N. Mehrotra.

13. Singh, Mahendra Pratap. *Management correlation between industrial relation and productivity.* BHU, Varanasi. Prof. R.A. Singh.

14. Singh, Rajeeva Kumar. *Finance of small scale industry in Eastern U.P.* BHU, Varanasi. Dr. K.N. Sharma.

15. Tiwari, Murli Dhar. *Role of public debt in economic development of India.* BHU, Varanasi. Dr. K.M. Pandey.

Management

1. Bhaduri, Jagannath Prasad. *Wage and incentive system in public sector: A case study.* BHU, Varanasi. Dr. C. Lal.

2. Duggal, A.C. *Impact of regional rural banks.* BHU, Varanasi. Dr. R.M. Srivastava.

3. Ghose Shome Nath. *Financial control of tea plantation and manufacture.* BHU, Varanasi. Dr. Deepak Barman.

4. Kapoor, Inder Kumar. *Finance of joint stock companies in U.P.* BHU, Varanasi. Dr. S.M. Srivastava.

5. Mohammad Moinuddin Kamal. *A comparative study on export marketing of jute goods in Bangladesh and India.* BHU, Varanasi. Dr. Abrar Ahmad.

6. Pandey, R.K. *Manpower planning in the nationalised banking section: A case study.* BHU, Varanasi. Prof. A.K. Shah.

7. Pathak, Pramod. *Occupational stress and stress-coping in a production system.* BHU, Varanasi. Prof. M. Lal.

8. Srivastava, Sadanand. *Personnel function in central universities.* BHU, Varanasi. Prof. A.K. Shah.

9. Tripathi, P.S. *Financing of joint stock companies in U.P.: A case study of institutional financing.* BHU, Varanasi. Dr. Chhote Lal.

10. Yadava, U.K. *Finances of non-banking intermediaries in India.* BHU, Varanasi. Dr. Chhote Lal.

HUMANITIES

Philosophy

1. Balram Singh. *Boudh nyaya mein nirvikalp gyan.* BHU, Varanasi. Dr. Rudra Dhar Jha.

2. Kalp Nath Ram. *Ashubh kee samasya : Ek sameekshatmak vivechan: Hindu, Isai evam Islam dharmon ke sandarbh mein*. BHU, Varanasi. Dr. Satya Narain Pandey.

3. Shrivastava, Kamini. *Ayurvediya sanghitao ke pariprekshya mein Vad vidya ka vikas*. BHU, Varanasi. Dr. Jyotir Mitra.

Religion

1. Samerchit, Phrawaha Samrueng. *Buddha-Sasane Kammavadass adadharana*. BHU, Varanasi. Dr. K.C. Jain.

2. Sharma, Sumitra. *Manduvyoparipad ka sameekshatmak adhyayan*. BHU, Varanasi. Dr. Babu Lal Mishra.

Fine Arts

Music

1. Bhat, Sudhakar. *Sitar aur tanpoore kee melan vidhi ka dhwani vigyan aur saundarya bodh kee drishti se adhyayan*. BHU, Varanasi. Prof. (Miss) Prem Lata Sharma.

2. Mishra, Ragini. *Tantri vadyo kee vedan shailiyon ke vikas ka vivechanatmak adhyayan: Madhya kal se vartman kal tak*. BHU, Varanasi. Dr. (Smt). Pushpa Basu.

Language & Literature

English

1. Banerji, Meera. *An approach to english language teaching syllabus design at the undergraduate level in India*. BITS, Pilani. Prof. Krishna Mohan.

2. Mary, K.A. *Verb phrase in english and malayalam: A study based on the new testamental translations*. U Ker, Trivandrum. Dr. Elias Valentine.

3. Singh, Bina. *Social satire in the novels of Kingsley Amis*. BHU, Varanasi. Dr. M.K. Choudhury.

4. Srivastava, Nayanika. *The poetry of Robinson Jeffars*. BHU, Varanasi. Dr. P.K. Pandey.

5. Srivastava, Neelam. *George Orwell: Art and politics*. BHU, Varanasi. Dr. R.S. Sharma.

6. Tewari, Vijay Bahadur. *The poetry of Matthew Arnold*. BHU, Varanasi. Dr. N.K. Lal.

Sanskrit

1. Acharya, Uma. *Prakarantar yog ke vyavharik lakshya*. BHU, Varanasi. Dr. Trinath Sharma.

2. Anju Rani. *Kathopanishad: Ek adhyayan*. BHU, Varanasi. Dr. Vishwanath Vamandev.

3. Chaturvedi, Raghvendar. *Panchmahakavyantragat jyotirvigyanam*. BHU, Varanasi. Dr. Shivdatt Sharma Chaturvedi.

4. Dadhich, Ramesh Chandra. *Maha Bhartiya sanskritik evam samajik upakhyanon ka sameekshatmak adhyayan*. Devi Ahilya, Indore. Dr. K.N. Joshi

5. Mishra, Hari Govind. *Bhagvate sankhyadarshansameekshanam (Puranetihas)*. BHU, Varanasi. Dr. Ramashanker Tripathi.

6. Mishra, Pushpalata. *Pandit Vargeesh Shastri kee krityon ka sameekshatmak adhyayan*. Devi Ahilya, Indore. Dr. K.N. Joshi.

7. Pandey, Mahendra. *Syavtar Samjhala nyaya: Tulnatmak vimarsh*. BHU, Varanasi. Dr. Chandrabhanu Sharma Bharadwaj.

8. Pandey, Sudershan. *Prashan jyotish vimarsh*. BHU, Varanasi. Prof. Raj Mohan Upadhyay.

9. Pandey, Upendra. *Parniniya pratyahar sameeksha*. BHU, Varanasi. Dr. Ramadhin Chaturvedi.

10. Pandey, Vishwanath. *Dasham Bhavasya vaigyanik vishleshanam*. BHU, Varanasi. Pandit Ram Janam Mishra.

11. Pandey, Vijay Bahadur. *Adhyayatyamramayan : Balmikiramayanayostulatmak adhyayanam*. BHU, Varanasi. Dr. Ramashanker Tripathi.

12. Patni, Indubala. *Jainacharya Shri Kundhusager kee sanskrit sahitya ko den*. Devi Ahilya, Indore. Dr. H.R. Dholkia.

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14. Shitut, Sunanda. *Beesvin shati ke sanskrit upanyason ke pariprekshya mein Dr. Shrinath Hasurkar kee sanskrit rachnaon ka sameekshatmak adhyayan*. Devi Ahilya, Indore. Dr. K.N. Joshi.

15. Singh, Pratibha. *Shri Madacharya Vadivagishvari krit Maan Manohar ka alochnatmak parisheelan*. BHU, Varanasi. Dr. Sita Ram Shastri.

16. Vipat, Vandana. *Kashyapshilpam: Ek sameekshatmak adhyayan*. Devi Ahilya, Indore. Dr. H.R. Dholkia.

Hindi

1. Bimal, Rajendra Prasad. *A comparative study of the morphology of Nepali, Maithili and Hindi*. BHU, Varanasi. Dr. S.S. Misra.

2. Patwardhan, Sandhya Hari. *Bhaktikaleen hindi kavya mein Gita darshan*. Shivaji U, Kolhapur. Dr. G.S. Surve.

Urdu

1. Kalim Ahmad. *Iqbal kee nazmgoi*. BHU, Varanasi. Dr. H.C. Nayyar.

2. Shafiqullah. *Sir Syed: Hayat aur Khidmat*. BHU, Varanasi. Dr. S.H. Naqvi.

3. Shamsi, Abbas Murtaza. *Mirza Abbas Beg Mehshar: Life and Works*. BHU, Varanasi. Dr. H.C. Nayyar.

Telugu

1. Sumathi, G. *Socio-economic life of Andhrapradeshas reveated by the Mackeni Kaifiats: A critical study*. BHU, Varanasi. Prof. B.V. Suryanarayana.

2. Vethiraja Valli, S. *Udarharana: Its origin, and development in telugu literature with special reference to desi*. BHU, Varanasi. Dr. (Miss) B. Ratnavali.

3. Vijaya Lakshmi. C. *Music and poetry in Tyagaray keertans*. BHU, Varanasi. Prof. B.V. Suryanarayana.

Geography

1. Bhowmick, Soma. *Morphometric analysis of Paras Nath Hills, Bihar*. BHU, Varanasi. Dr. N. Kaushik.

2. Dubey, Rabindra Nath. *Population and socio-economic status of U.P.* BHU, Varanasi. Dr. B. Dubey.

3. Krishna, K.C. *Environmental deterioration and its impact on the socio-economic condition in the catchment area of Seti River*. BHU, Varanasi. Prof. K.N. Singh.

4. Pawar, Rajendra Singh. *Folk house types of lower Chambal Region: A study in cultural geography*. Pb U, Chandigarh. Prof. A.B. Mukherji.

5. Rai, Rajesh Kumar. *Geography: Industrial development pattern and planning in Uttar Pradesh*. BHU, Varanasi. Dr. V.R. Singh.

6. Shitala Prasad. *Ground water hydrology in any selected area*. BHU, Varanasi. Prof. N.K.P. Sinha.

7. Singh, Akbal Bahadur. *Kalidasa kee kritiyon mein sanskritik bhugol*. BHU, Varanasi. Dr. Onkar Singh.

8. Singh, Arun Kumar. *Nagariya bhugol: Jaunpur ka nagarikaran*. BHU, Varanasi. Prof. H.M. Singh.

9. Singh, Gargi Rani. *Geography physical*. BHU, Varanasi. Dr. N.K.P. Sinha.

10. Singh, K.K. *Integrated rural development*. BHU, Varanasi. Dr. Onkar Singh.

11. Singh, Pramod-Shanker. *Impact of landform on land use in Doon Valley*. BHU, Varanasi. Prof. N.K.P. Sinha.

12. Singh, Ram Manohar. *Urban trends in the Saryupar Plain of U.P.* BHU, Varanasi. Dr. Onkar Singh.

History

1. Amresh Singh. *Area social history*. BHU, Varanasi. Prof. V.C. Srivastava.

2. Chandra Kanta. *Area socio religious history of Ancient India*. BHU, Varanasi. Prof. V.C. Srivastava.

3. Dorje, Urgian. *Cultural history of Western Himalayas with special reference to Ladakh, Zanskar, Lahaul-Spiti and Kinnaur from 7th century A.D. to 12th century A.D.* Pb U, Chandigarh. Dr. Sudhakar Pandey.

4. Kushwaha, Ashwani Kumar Singh. *Area religious history*. BHU, Varanasi. Prof. V.C. Srivastava.

5. Painuly, Geeta. *Area social history*. BHU, Varanasi. Prof. V.C. Srivastava.

6. Pandey, Vibhuti Narayan. *The Life of Buddha and Jataka stories in early Indian art, from the earliest time to 600 A.D. : Their presentation in museum*. BHU, Varanasi. Dr. T.P. Verma and Dr. S.K. Srivastava.

7. Patel, Kesh Ram. *Archaeology of Upper Ganga Valley.* BHU, Varanasi. Prof. K.K. Sinha.

8. Rai, Ajai Shanker. *Feudal culture in Ancient India*. BHU, Varanasi. Dr. Maheshwari Prasad.

9. Rai, Jeewan. *Area religious history*. BHU, Varanasi. Prof. V.C. Srivastava.

10. Sharma, Rajesh Kumar. *Area puranic studies*. BHU, Varanasi. Prof. V.C. Srivastava.

11. Singh, Phuritsabam Birmani. *Socio-economic conditions of Assam in the first millennium A.D.* Pb U, Chandigarh. Dr. S.N. Chopra.

12. Singh, Vindhyachal. *Area India and Indonesia*. BHU, Varanasi. Dr. (Mrs.) S.D. Singhal.

13. Walia, Jagdeep. *Anglo-Afghan relations, 1917-1939.* Pb U, Chandigarh. Dr. R.I. Malhotra.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Library Science

1. Singh, Shambhu Narain. *The use of social science literature in India: A bibliometric study*. BHU, Varanasi.

Psychology

1. Agarwala, Nandalal. *Determinants of productivity and job satisfaction among the Mica mine workers*. U Calcutta.

2. Gupta, Patralekha. *Self-concept, dependency and adjustment pattern of abandoned institutionalised preadolescent.* U Calcutta.

3. Gupta, Uma. *A survey of leisure-time activities of adolescents in relation to age, sex, personality and family status*. BHU, Varanasi.

4. Indu Bala. *Obedience to authority amongst university students: An experimental analysis*. U Delhi.

5. Mandal, Manaskumar. *An experimental study on facial expression of emotion*. U Calcutta.

6. Saksena, Kiran. *Construction and standardization of a general mental ability test for 6 to 10 years age group students*. RDV, Jabalpur.

Sociology

1. Mohammad Salim. *Social dimensions of adoption of innovations in agriculture : A sociological study based on Umrahan and Barain Villages in Chiraigaon Block of Varanasi District*. BHU, Varanasi.

2. Patil, Krantikumar Rangrao. *A sociological study of panchayati raj leadership in Sangli District*. Shivaji U, Kolhapur.

3. Ransijn, Piet. *Collective consciousness and peace : A sociological study*. U Raj, Jaipur.

Political Science

1. Arya, Kamla Devi. *Prem Chand ke samajik evam rajnitik vichar*. BHU, Varanasi.

2. Chaube, Dilip Kumar. *Raja Mahendra ke rajnitik vichar aur karyakram*. BHU, Varanasi.

3. Ghodhke, Haribhau Mahadev. *Revolutionary nationalism in the Marathi speaking areas of Western Iudia 1858-1947*. Devi Ahilya, Indore.

4. Grover, Neelam. *Rajasthan mein police sevi varg prashasan*. U Raj, Jaipur.

5. Gurjar, Leela Ram. *Ram Manohar Lohia ke vishisht sandarbh mein Bhartiya samajvadi chintan*. U Raj, Jaipur.

6. Joseph, Sarah. *The concept of power in contemporary political theory*. U Delhi.

7. Kilawat, Satish Chandra. *The working of the Delhi Metropolitan Council 1967 to 1976*. U Delhi.

8. Mahajan, Loveleena. *Personnel administration in the Indian Railways ; A study in the recruitment and training policies*. U Delhi.

9. Mani, D. Rama *A Study of the policy and programme for the physically handicapped in India since 1960*. BHU, Varanasi.

10. Pauranik, Nilima. *Role of non-alignment in international politics*. Vikram U, Ujjain.

11. Saxena, Kamini. *Bhartiya Sansad mein vipaksh kee bhoomika*. Vikram U, Ujjain.

12. Sharma, Gopal Krishan. *1971 ke uprant Bhartiya videsh niti kee badalti avdharnayen*. Vikram U, Ujjain.

13. Sharma, Virendra Kumar. *Dharam nirpekshta ke parivesh mein Rashtriya Swayam Sewak Sangha kee rachna evam bhoomika*. Meerut U.

14. Singh, Anil Kumar. *Janpad star per dalgat rajniti 1967 se 1980 tak: Uttar Pradesh ke Ballia Janpad ka vishesh adhyayan*. BHU, Varanasi.

15. Singh, Dharam Pal. *Maharishi Balmiki evam Tulsidas ke rajnitik vicharon ka tulnatmak adhyayan*. Meerut U.

16. Sushma. *Regional political development: A case study of Mawana Block*. Meerut U.

17. Vashishtha, Nisha. *Bharat mein naukarshahi kee karya pranali ka adhyayan*. Vikram U, Ujjain.

Economics

1. Dalal, Ishwar Singh. *Growth and diversification in agricultural output in Haryana during 1966-76*. Meerut U.

2. Das, Santi. *Pattern of investment in agriculture in Orissa during the plan period*. Utkal U, Bhubaneswar.

3. Goyal, R.C. *Slate, pencil and allied industries in M.P.* Vikram U, Ujjain.

4. Kardwal, Genda Singh. *The growth and development of fertilizer industry in India.* Meerut U.

5. Lily. *Municipal finance in Panjab* 1967-68 *to* 1979-80. GNDU, Amritsar.

6. Mishra, Ramrajesh. *The World Bank: Its economic and socio-political impact on developing countries with special reference to India.* Vikram U, Ujjain.

7. Panda, Rajkishore. *Agriculture indebtedness in the district of Puri.* Utkal U, Bhubaneswar.

8. Prem Kumar. *Corporate growth in India: A case study of* 100 *largest manufacturing companies.* GNDU, Amritsar.

9. Shroff, Gulabdas. *A study of profitability and productivity of Nepa Mills.* Vikram U, Ujjain.

10. Vishnoi, S.P. *Formulation, appraisal and implementation of the Rajasthan Dairy Development Project : A critical study.* U Raj, Jaipur.

Education

1. Agarwal, Subhash Chandra. *A comparative study of learning styles of high and low creative students belonging to different types of institutions.* Meerut U.

2. Agarwal, Vidya. *A study of stress proneness adjustment and job satisfaction as predictors of administrative effectiveness of principals.* Meerut U.

3. Ajgaonkar, Vinodini. *A study of juvenile delinquents admitted in certified schools of Bombay and a study of impact of environment of these schools on their behaviour.* SNDT. Bombay.

4. Panda, Daityari. *An investigation into the characteristics of adult illiterates and their perception of learning environment.* Utkal U, Bhubaneswar.

5. Pandey, Sarla Kumari. *Factors affecting sense of responsibility amongst higher secondary school students.* BHU, Varanasi.

6. Parbodh Singh. *Interaction analysis of teaching and learning process with respect to teachers' questioning behaviour and pupils' responses.* GNDU, Amritsar.

7. Raghavan, Jayalakshmi. *A critical study of Sri Aurobindo's contribution to the building of modern Indian philosophy of education.* Nagpur U.

8. Rai, Geeta. *Astudy of the self-concept of the prospective teachers.* BHU, Varanasi.

9. Syag, Ramnarayan. *Study of teaching competence of preservice and tnservice teachers trained through different treatments of microteaching.* Devi Ahilya, Indore

10. Wadhi, Kailash Kanta. *Preparation of reading materials for girl dropouts in Delhi slums.* U Delhi.

11. Yadav, Ram Avtar. *A study of the effect of training for classroom questioning behaviour on teaching competency and pupil's achievement.* Meerut U.

12. Yurachai, Satien. *Adaptation of Patel and Patel's general ability tests for Thai population and to study general ability vis-a-vis some variables.* SPU, Vallabh Vidyanagar.

Commerce

1. Bansal, Rakesh Kumar. *The developing countries and UNCTAD with special reference to India.* Meerut U.

2. Gupta, Mahesh Chander. *Development of trade unions since independence.* Meerut U.

3. Gupta, Saroj. *Structural changes in India's exports.* U Delhi.

4. Gupta, Sarvesh Kumar. *Organisational set up of commercial banks in India.* U Delhi.

5. Husain, Masud. *Depreciation cost in Bangladesh jute industry: A case study with reference to price level changes.* BHU, Varanasi.

6. Maheshwari, Girish Chandra. *Measurement of business income: A study of selected corporate enterprises in India.* U Delhi.

7. Misra, Panch Narain. *Financial institutions and the new entrepreneurial class.* U Delhi.

8. Pande, D.P. *Corporate tax structure in India and corporate behaviour.* NBU, Rajarammohunpur.

9. Raut, Bhaoorao Deoraoji. *Scheme of financing block level village Artisans' Cooperative Societies in Maharashtra with special reference to Sangli District.* Shivaji U, Kolhapur.

10. Singh, Ashoka Kumar. *Company taxation in India.* BHU, Varanasi.

11. Venugopal Reddy, L. *Problems of small scale industries in Rayalaseema Region.* Krishnadevaraya U.

12. Yadav, Mulayam Singh. *Madhya Pradesh ke audyogik vikas mein Rajya Vitt Nigam kee bhoomika, san* 1972 *se* 1981 *ke vishesh karya pragati ke sandarbh sahit.* RSU, Raipur.

Management

1. Chawla, Ved Prakash. *Designing electricity tariff structure : A case study of U.P. State Electricity Board.* BHU, Varanasi.

2. Habib Agha Razzai. *Managerial behaviour of middl level managers.* U Delhi.

3. Jacob, Thangam. *The impact of sterilisation on family relationships.* U Cochin.

4. Rajan Nair, N. *A study of the evolution and working of regulated markets in Tamil Nadu.* U Cochin.

5. Ramaswamy, V.S. *A study of the marketing of fertilizers in India.* U Cochin.

6. Singh, Bal Ram. *Corporate planning: An analysis of the practices of selected large size companies in India.* BHU, Varanasi.

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CLASSIFIED ADVERTISEMENTS

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No. D6-758/83-84 Dated 16th April, 1984

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Applications in EIGHT SETS in the prescribed form are invited for the following Teaching and Non-Teaching posts to reach on or before 15TH MAY, 1984. from duly qualified candidates of Indian Nationality in the University of Mysore. Indian Nationals who are residing abroad may also apply.

Sl. No.	Name of the Post Graduate Dept.	No. of posts	Reserved for	Additional qualifications/specialisation in addition to General Qualifications, if any
1	2	3	4	5
	POST-GRADUATE DEPARTMENT, MANASA GANGOTRI, MYSORE AND B.R. PROJECT, SHIMOGA			
1.	**Centre for Commonwealth Literature & Research**			
	Reader in Commonwealth Literature	One	BCM	M.A. I or High Second Class in English with Commonwealth Literature as one of the optional subject. Ph.D. preferably in West Indian Literature.
2.	**Kannada**			
	Reader	One	BCT	
3.	**Hindi**			
	Lecturer	One	S.C.	
4.	**Sanskrit**			
	Lecturer	One	G.M.	
5.	**Urdu**			
	Reader	One	G.M.	
	Lecturer	One	BCT	
6.	**History** (Economic History)			
	Professor (Re-advertised)	One	S.C.	Specialisation in Economic History and Publication of Research work of high standard in History.
	Lecturer (Historical Geography)	One	B.T.	
	Lecturer	One	G.M.	
7.	**Ancient History and Archaeology**			
	Reader (Archaeology)	One	SC	
8.	**Political Science**			
	Professor (Public Administration)	One	BCM	
9.	**Psychology**			
	Reader	One	BT	
	Lecturer (Re-advertised)	One	SC	DESIRABLE : Experience in using Electronic devices like Electro-Enconphotograph
10.	**Sociology**			
	Reader	Two	GM—One BCM—One	
11.	**Social Work**			
	Professor (Re-advertised)	One	SC	The qualification in (a) & (b) may be in Sociology
	Reader (Re-advertised)	One	GM	
	Lecturer	One	BCM	

1	2	3	4	5
12.	**Economics**			
	Professor	One	GM	The qualification in (a) & (b) may be in Co-operation/Economics/Economic Co-operation in respect of one post of Professor, One post of Reader, One Post of Lecturer.
	Readers	Two	ST—One BCT—One	Specialisation in Quantitative Economics in respect of One Post of Reader.
	Lecturers	Two	GM—One BT—One	
	Lecturer (B.R. Project)	One	SC	
13.	**Anthropology**			
	Professor (Re-advertised)	One	BCM	
	Reader	One	BSG	For Readers post and one post of Lecturer the qualification in (a) and (b) may be either in Social Anthropology or in Sociology
	Lecturers (Re-advertised)	Three	BCM—One GM—One BCM—One	**Additional Desirable** Specialisation in Tribal Sociology or in Urban area studies Second post of Lecturer : Specialisation in Village Community studies Third Post-General
	Lecturers	Two	BCM—One GM—One	
14.	**Department of Business Administration (MBA)**			
	Professor	One	SC	Qualification in (a) and (b) may be either in Commerce or in MBA.
	Readers	Two	SC—One BCM—One	I or II Class M. Com or M.B.A., with a doctoral degree in the relevant field.
15.	**Geography**			
	Reader	One	BSG	
	Lecturer	One	BSG	
	Lecturer (Post is temporary likely to continue)	One	SC	
16.	**Institute of Development Studies**			
	Reader in Geography	One	BSG	Post is temporary, likely to continue Qualifications in (a) and (b) may be in Urban & Regional Planning/Development Planning/Economics/Political Science.
	Lecturer (Regional Planning)	One	BCM	
17.	**Education**			
	Professor (Re-advertised)	One	G.M.	
	Lecturer	Three	S.C.—1 BCM—1 G.M.—1	
18.	**Jainology & Prakrit**			
	Reader	One	G.M.	
19.	**Statistics**			
	Professor	One	G.M.	Specialisation in Statistical Quality Control
	Lecturer (Re-advertised)	One	BSG	
	Lecturer	One	BCT	Specialisation in Demographic Studies/Reliability.
	Lecturer in Computer Science	One	S.T.	
20.	**Physics**			
	Professor	One	BCM	
21.	**Zoology**			
	Lecturer	One	G.M.	
22.	**Chemistry**			
	Professor (Analytical Chemistry)	One	BSG	
	Professor (Organic Chemistry)	One	G.M.	
	Reader (Physical Chemistry)	One	BCM	
	Lecturer (Physical Chemistry)	One	BCM	
	Lecturer (In-organic Chemistry)	One	S.C.	

1	2	3	4	5
23.	**Mathematics**			
	Reader Lecturer	One/ Two	BSG BCM—1 G.M.—1	Specialisation in Numerical Analysis
	Lecturer (B.R. Project)	One	BSG	
24.	**Botany**			
	Professor	Two	B.T.—1 BSG—1	
	Reader (Post is temporary likely to continue)	One	G.M.	
	Lecturer	One	G.M.	
25.	**Geology**			
	Lecturer	One	BCT	
26.	**Applied Botany**			
	Professor	One	G.M.	Specialisation in Seed pathology, Mycology and Plant Pathology/Seed Technology.
	Reader	One	G.M.	Specialisation in Mycology/and Plant Pathology/Seed Pathology/Seed Technology.
	Lecturer	Two	BCM—1 G.M.—1	Preference will be given to M.Phil in Seed pathology. (a) Specialisation in Virology (b) Specialisation in mycology, Plant pathology/Seed pathology/Microbiology.
27.	**Library Science**			
	Professor	One	S.C.	
28.	**Journalism**			
	Professor	One	BCT	
	POST-GRADUATE CENTRE, B.R. PROJECT, SHIMOGA			
29.	**Industrial Chemistry**			
	Reader (Re-advertised)	One	S.C.	The qualification in (a) may be in Industrial Chemistry or Technology. The Degree in (b) may be in Industrial Chemistry or Chemical Engineering. **Additional Desirable** Experience in Chemical Industry.
	Lecturer (Re-advertised)	Two	G.M.—1 BCM—1	The degree in (b) may be M.Sc., in Industrial Chemistry/M.Sc. (Tech)/M. Tech. in Chemical Technology/Engineering.

SCALE OF PAY

(a) Professor : Rs. 1500-60-1800-100-2000-125/2-2500
(b) Reader : Rs. 1200-50-1300-60-1900
(c) Lecturer : Rs. 700-40-1100-50-1600

General Qualifications prescribed for the posts of Professors, Readers & Lecturers in the Post-graduate Departments at Mysore and B.R. Project, Shimoga.

1. Professors

Essential

(a) A Doctorate degree or published work of an equally high standard.

(b) Consistently good academic record with I or High II Class (B+ or 55%) Master's Degree in relevant subject or equivalent degree of a foreign University.

General Qualifications

Note

(1) Having regard to the need for developing interdisciplinary programmes the degrees in (a) and (b) above may be in relevant subjects.

(2) Provided that if the Board of Appointments is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard it may relax any of the qualifications prescribed in (b) above.

(3) Provided further that if a candidate possessing a Doctorate degree or an equivalent published work is not available, the persons possessing consistently good academic record and the relevant Master's Degree may be appointed (due weightage being given to M. Phill equivalent research degree or research work of quality) on the condition that such candidate will have to obtain a doctorate degree or give evidence of published work of an equally high standard within five years of the appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

(c) 10 years of teaching-cum-research experience in degree or post-graduate classes.

(d) Capacity to carry out independent research work. Should have guided candidate for research degree successfully.

Desirable

Publication of research work of high standard in the subject.

2. Readers

Essential

(a) A Doctorate degree or published work of an equally high standard;

(b) Consistently good academic** with I or high II Class (B+) Master's degree in a relevant subject or an equivalent degree of a foreign University.

Note

(i) Having regard to the need for developing inter-disciplinary programmes the degrees in (a) and (b) above may be in relevant subjects.

(ii) Provided that if the Board of Appointments is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (b) above.

(iii) Provided further that if a candidate possessing a Doctorate degree or an equivalent published work is not available the person possessing consistently good academic record and the relevant, Master's Degree may be appointed (due weightage being given to M. Phil equivalent research Degree or research work of quality) on the condition that such candidate will have to obtain a Doctorate Degree or give evidence of published works of an equally high standard within 5 years of the appointment failing which he/she will not be able to earn future increments until he/she fulfils these requirements.

(c) Five years of teaching-cum-research experience;

Desirable

Publication of research work of high standard in the subject.

3. Lecturers

Essential

(a) A Doctorate degree or published work of an equally high standard;

(b) Consistently good academic record** with I or high II class (B+) Master's Degree in a relevant subject or an equivalent degree of a foreign University;

Note

(i) Having regard to the need for developing Inter-disciplinary Programmes, the degree in (a) and (b) above may be in relevant subjects.

(ii) Provided that if the Board of Appointment is of the view that the research work of a candidate as evident either from the thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (b) above.

(iii) Provided further that if a candidate possessing a Doctorate degree or an equivalent published work is not available or is not considered suitable, the person possessing consistently good academic record (due weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed on the condition that he will have to obtain a Doctorate Degree, or give evidence of published work of an equally high standard within 5 years of his appointment, failing which he/she will not be able to earn future increments until he/she fulfils these requirements.

(c) Teaching OR Research experience of not less than 2 years in all.

Desirable

Publications of research work of high standard in the subject.

Explanation

****Explanation :** Consistently good academic record means overall record of all assessment throughout the academic career leading to the Master's Degree which should atleast be B+ or high Second Class.

Note: The teaching experience should be in degree or Post-graduate classes.

(4) Candidates/Applicants without knowledge of Kannada are required to learn Kannada of the Certificate Courses level of the Institute of Kannada Studies, University of Mysore, or an equivalent course as declared by the University within a period of two years from the date of appointment. (This is common to Professor, Reader & Lecturer of Post-graduate Departments only.)

Note: Field of specialisation may please be indicated in the application while furnishing the Qualification.

UNDER-GRADUATE COLLEGES

Sl. No.	Name of the Post	College	No. of Posts	Reserved for
1	2	3	4	5
1.	Lecturer in History	Maharaja's College	One	G.M.
2.	Lecturer in Physics	Yuvaraja's College, Mysore	One	BSG
3.	Lecturer in Sociology	Uni. Evening College, Mysore	One	S.T.
4.	Lecturer in Botany	Yuvaraja's College, Mysore	One	S.C.
5.	Lecturer in Sociology	Maharaja's College, Mysore	One	G.M.
6.	Lecturer in Mathematics (Re-advertised)	Yuvaraja's College, Mysore	One	BSG

SCALE OF PAY : Rs. 1050-50-1200-60-1500-75-1950

Qualifications

(a) **Essential :** I or II Class Master's Degree or Honours Degree in the relevant subject and ability to read and write Kannada fluently.

(b) **Desirable :** Two years experience of Teaching degree or Post-Graduate classes, publication of work of high standard or a Research Degree.

INSTITUTE OF CORRESPONDENCE COURSES & CONTINUING EDUCATION, MANASA GANGOTRI, MYSORE

Sl. No.	Name of the Post	No. of posts	Reserved for	Remarks
1	2	3	4	5
1.	Lecturer in Hindi	One	G.M.	(Re-advertised)
2.	Lecturer in Commerce	Two	S.T.—1 S.C.—1	
3.	Lecturer in Political Science	One	G.M.	
4.	Lecturer in History (Temporary but likely to be continued).	One	B.T.	
5.	Lecturer in Accountancy	One	BCM	

SCALE OF PAY OF LECTURER : Rs. 700-40-1100-50-1600.

Qualifications Prescribed

Essential : (a) I or II Class Master's Degree in the subject with atleast 3 years teaching experience.
(b) Knowledge of Kannada.

Desirable : Publication work of credit

NON-TEACHING POSTS

Sl. No.	Name of the Post	No. of Posts	Scale of Pay	Reserved for	Remarks
1	2	3	4	5	6
	INSTITUTE OF KANNADA STUDIES, MANASAGANGOTRI, MYSORE				
1.	Research Assistant Gr. II (Editing Section)	One	Rs. 860-30-950-50-1200-60-1500-75-1650	BSG	
2.	Curator (Folklore Museum)	One	Rs. 1050-50-1200-60-1500-75-1950	B.T.	
3.	Galary Guard (Folklore Museum)	One	Rs. 390-5-410-10-460-15-550	G.M.	
	MANASAGANGOTRI, MYSORE				
4.	Research Assistant (PG Dept. of History) ..	One	Rs. 920-30-950-50-1200-60-1500-75-1725	BCT	
5.	Research Assistant (Minerological Institute)	One	-do-	BSG	
6.	Technician (Minorological Institute)	One	Rs. 630-20-650-25-800-30-950-50-1200	BCM	
7.	Laboratory Assistant (PG Dept. of Chemistry)	One	-do-	S.C.	
	OFFICE OF THE DEAN OF STUDENT WELFARE, MYSORE				
8.	Asst. Dean of Student Welfare (Lady)	One	Rs. 1050-50-1200-60-1500-75-1950	G.M.	The post is reserved for a Lady candidate.
	MAHARAJA'S COLLEGE, MYSORE				
9.	Laboratory Assistant (Criminology Dept.)	One	Rs. 630-20-650-25-800-30-950-50-1200	S.C.	
	CENTRAL WORKSHOP, MYSORE				
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1	2	3	4	5	6
	POST-GRADUATE CENTRE, SHIMOGA				
13.	Horticultural Asst. Gr. II	One	Rs. 550-20-650-25-800-30-950-50-1050	G.M.	
14.	Driver	One	Rs. 410-10-460-15-500-20-650-20-700	G.M.	
	YUVARAJA'S COLLEGE, MYSORE				
15.	Workshop Assistant	One	Rs. 410-10-460-15-550-20-650-25-700	BCT	

Qualifications

Research Assistant Gr. II

(Editing Section)

Master's Degree in Sanskrit OR Kannada. A good knowledge of South Indian scripts and experience in preservation of antiquities (Training in Archives keeping) OR Two Vidwan Examinations of which atleast one shall be in Sastras atleast Kannada Pandit Examination and one Sanskrit Vidwat Examination or a good knowledge of South Indian scripts. Preferably General Education upto SSLC.

2. **Curator (Folklore Museum)**

A. (1) I or II Class M.A., Degree in Kannada with Folklore as a Special subject;

OR

I or II Class M.A., in Anthropology with experience in collection of Folklore articles with special reference to Karnataka;

OR

A graduate with Anthropology OR Sociology as major subject with experience in field methods and Fine Arts.

(2) Two years experience in Folklore OR Anthropology Museum.

B. (1) Publications in the field of Folklore OR Fine Arts;

(2) Knowledge of Kannada is Essential.

3. **Gallary Guard (Folklore Museum)**

Completion of VII Standard.

4. **Research Assistant**

(Post-Graduate Department of History).

Qualifications as required for the post of Lecturer* in the University.

(a) A Doctorate Degree or published work of an equally high standard;

(b) Consistently good academic record* with I or High Second Class (B+) Master's Degree in a relevant subject or an equivalent Degree of a Foreign University.

****Explanation :** Consistently good academic record means overall record of all assessment through out the academic career leading to the Master's Degree which should atleast be B+ or High Second Class.

5. **Research Assistant**

(Minerological Institute).

M.Sc., in Geology with any two of the subjects Physics, Chemistry & Mathematics in the B.Sc. Degree.

Desirable: A good physique to do field work and good draftmanship.

6. **Technician :**

(Minerological Institute, MGM)

B.Sc., with Physics, Chemistry & Mathematics OR Physics, Mathematics & Geology OR SSLC with I.T.I. Certificate specialised in machining.

Desirable : Experience in Laboratory OR Workshop with an aptitude by Scientific work.

7. **Laboratory Assistant**

(PG Dept. of Chemistry, MGM)

B.Sc., Degree with Chemistry as one of the subject of study.

8. **Asst. Dean of Student Welfare:**

Essential

(i) I OR II Class Master's Degree of a recognised University with a good knowlege of Kannada;

(ii) 5 years of teaching experience in an under graduate college or P.G. Department;

Desirable

(i) Experience of atleast 3 years in organising students activities such as Camps, Sports, Seminars, Symposia etc.

(ii) Administrative experience of three years.

9. **Laboratory Assistant**

(Criminology Department, MGM).

(i) B.A./B.Sc., with Criminology and Forensic Science as one of the subjects;

ii) Practical knowledge of dark room work;

10. **Foreman (Central Workshop, MGM)**

Diploma in Mechanical/light Electrical Engineering with 5 years experience in a well organised firm and persons who have no Diploma qualification, but who have Ten years experience in any reputed firm.

Desirable : Diploma OR Pass in Certificate Course in Automobile.

11. **Lino-Operator**

(University Printing Press & Stationery Dept, MGM).

SSLC or its equivalent qualification with three years experience in a recognised Printing Press.

12. **Compositor Gr. II**

(University Printing Press & Statoinery Dept, MGM).

VII Standard.

13. **Horticultural Assistant Gr. II**

(P.G. Centre, BR Project, Shimoga)

General : A pass certificate in Horticultural Training conducted by the Department of Horticulture, Karnataka State.

Desirable : Practical knowledge of Garden Work with atleast 2 years experience.

14. **Driver**

(PG Centre, BR Project).

A current driving licence for Heavy vehicle and the recognised First Aid Training Certificate.

15. **Workshop Assistant**

(Yuvaraja's College, Mysore).

VII Standard with Technical experience in Smithy, Carpentry & Fitter. Educated in Chamarajendra Technical Institute, Mysore OR equivalent qualification.

The prescribed application forms in **EIGHT SETS** may be obtained from the Registrar, University of Mysore, Mysore, on payment of Rs. 15/- (Rupees fifteen only) for the posts of Professors and Readers and Rs. 10/- (Rupees ten only) for the posts of Lecturers and other posts. The amount may be paid in the office of the Registrar/Finance Officer, University of Mysore, Mysore, or by crediting the amount to the State Bank of Mysore/Treasury through the challan under the Head of Account "MYSORE UNIVERSITY FUNDS". **Demand Drafts or Money Orders may also be sent. Postal Orders and Cheques will not be accepted** under any circumstances. The requisition for the application forms must be accompanied by a self addressed envelop e of the size 6" x 12" duly stamped with Rs. 3.30 postal stamps for teaching posts and non-teaching posts. Requisitions received without self-addressed envelopes will be rejected. The application forms will be supplied only on production of the receipt/challan for having paid the application fee.

Eight copies of the application giving all the required particulars with copies of at least two testimonials, one of which should be from the Head of the Institution, if any, where the applicant is now serving or served last, attached to the application should be sent to reach the Registrar, University of Mysore, on or before the last date fixed. Copies of publications in eight sets, if any which will not be returned may be enclosed to the application form. True copies of marks cards of the qualifying examinations should be enclosed to all the eight copies of application without fail. Applications received without true copies of marks cards, degree certificates and other certificates will not be considered. Candidates who have appeared for the qualifying examination and awaiting results on the last date of receipt of application in the University need not apply.

Those who are in employment may send their applications through their present employer, so as to reach this

Office on or before the last date fixed. Applications received after the due date are subject to acceptance or rejection at the discretion of the University.

All envelopes/covers should be superscribed with the following:

"APPLICATION FOR TEACHING/NON-TEACHING POST IN THE UNIVERSITY OF MYSORE".

Canvassing directly or indirectly would disqualify the candidates.

The candidates selected will be usually appointed on probation for a period of two years; probationery period may be reduced or extended if the University so desires.

Reservation of vacancies for Scheduled Castes/Scheduled Tribes and other Backward Classes, viz. Backward Communities, Backward Castes, Backward Tribes or Special Group will be made for each category of posts in the University as per State Government Order in force to the extent indicated below:

1. Scheduled Castes (SC)	15%
2. Scheduled Tribes (ST)	3%

Other Backward Classes, viz.

1. Backward Communities (BCM)	18%
2. Backward Castes (BCT)	10%
3. Backward Tribes (BT)	5%
4. Special Group (BSG)	15%
5. General Merit (GM)	34%

Reservation of post/posts to any of the categories mentioned above has been noted against each post. If suitable candidates belonging to particular reserved categories are not available for selection will be made of candidates belonging to other categories in accordance with the provisions of the G.O. No. DPAR 50 SBC 80 dated 19th April 1982.

While recruiting to the posts mentioned above, if persons belonging to the reserved categories who are suitable for appointment are not available for being selected for vacancies reserved for such categories such vacancies shall be filled by selection of candidates belonging to other categories as per Government Orders in force from time to time. Applicants belonging to Scheduled Castes, Scheduled Tribes, Backward Communities, Backward Castes, Backward Tribes or the Special Groups are required to produce a Certificate in the prescribed form issued by the authorities empowered to issue such Certificates in support of their claims along with their application. Such Certificates should not have been issued earlier than one year by the competent authorities empowered to do so.

Persons below 18 years of age and above 60 years of age need not apply for any of the teaching posts. Applicants who are below 18 years and above 30 years need not apply for any of the non-teaching posts. However, the age limit of 30 years in respect of non-teaching posts is relaxable in deserving cases. Incomplete applications are liable to be rejected. It is open to the University to fill or not to fill the posts now advertised.

Application fee once remitted is not refundable. Separate applications along with the enclosures are required to be submitted for each category of posts. The candidates selected should be prepared to work anywhere under the jurisdiction of the University.

T.A. and D.A. will not be paid either for attending the interview or for joining the post, if selected. If the meeting of the Board of Appointment fixed on any date stands postponed for any reason, the candidates who were present on that day will not be paid T.A./D.A.

***Abbreviations :**

SC—Scheduled Caste
BCM—Backward Communities.
BT—Backward Tribes.
BSG—Special Group.
ST—Scheduled Tribes.
BCT—Backward Castes.
GM—General Merit.

By Order
REGISTRAR

ANDHRA UNIVERSITY

WALTAIR

Advertisement No. 1/84

Applications in the prescribed form are invited for the following posts so as to reach the Registrar, Andhra University, Waltair, on or before 16-5-84. Each application shall be accompanied by a Bank Challan of Rs. 10/- (Rupees ten only) remitting the amount in the State Bank of India to the credit of "Andhra University Miscellaneous and other Charges Account" towards the Registration fee for the application. Postal orders will not be accepted. Candidates residing outside Andhra Pradesh shall remit the Registration fee by M.O., or Demand Draft in favour of Registrar, Andhra University, and send the M.O. receipt along with the application.

Sl. No.	Department/Subject	Name of the Post	No. of Posts
1.	Social Work	Community Organiser	1*
2.	English	Reader	1 at A.U.P.G. Extn. Centre, Kakinada.
3.	Commerce and Management Studies	Professors	4
		Readers	5
		Lecturers	5
		Research Associates : Case Analyst	3
		Placement Officer	1
4.	Theatre Arts	Stage Director	1*
5.	Geo-physics	Lecturers	2*

*Temporary.

The rule of reservation 15% for Scheduled Castes, 7.5% for Scheduled Tribes and 25% for Backward Classes including earmarking (roster system) and carrying forward of the vacancies is applicable to all the posts of Readers and Lecturers.

The earmarking of these vacancies among the S.Cs, S.Ts, and B.Cs, (A,B,C,D, groups) and for open competition will be done in accordance with G.O.M.S. No. 927 Edn., Dt. 20-11-1982; 995 Edn,, Dt. 16-12-1982 and G.O. Ms No. 117 Edn. (c) Dt. 5-3-1983 of the Government of Andhra Pradesh at the time of actually filling up of the vacancies.

Scales of Pay

Professor : Rs. 1500-60-1800-100-2000-125/2-2500.
Reader : Rs. 1200-50-1300-60-1900.
Lecturer : Rs. 700-40-1100-50-1600.
Stage Director : Rs. 1050-40-1250-50-1600 (D.A. Merged)
Placement Officer : Rs. 1100-50-1600.
Teaching/Research Associate/Case Analyst : Rs. 700-30-1000-40-1200.
Community Organiser : Rs. 750-30-1020-35-1300 (D.A. Merged).

The details of qualifications prescribed in respect of the above posts including the particular and precise Branch of specialisation which is needed and also the preferential qualifications considered desirable will be furnished along with the application form.

Requisition for the application forms may be made to "Sri P.S.R.K. Sarma, Deputy Registrar (Admn.), Andhra University, Waltair", accompanied by a self addressed and stamped envelope and a State Bank of India Challan for one rupee. Candidates residing outside Andhra Pradesh may however obtain the application form by remitting one rupee by M.O. or sending a Demand Draft in favour of the Registrar, Andhra University, Waltair, towards the cost of application form. The M.O. receipt should be sent along with the requisition for application form. **Postal Orders will not be accepted.** The University reserves the right to fill or not to fill all or any of the posts. The cover containing applications should be superscribed as "APPLICATION FOR APPOINTMENT TO THE POST OF ...."

Candidates belonging to S.Cs., S.Ts and B.Cs., are exempted from payment of prescribed application fee and registration fee. Persons already in service should send their applications through proper channel. Applications received after 5.00 P.M. on the due date will not be entertained.

M. Gopalakrishna Reddy
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

Advertisement No. DF 7/84

Applications are invited for the following posts :

Designation, (No. of Posts), Scale and Function	Educational Qualification and Experience
1. DATA PROCESSING CELL (DPC)	
(i) Data Processing Officer (1) Rs. 1100-50-1600 To look after the administrative function of the Cell and in-house Mini-computer facility and laise with user deptts.	I Class B.E./B. Tech./M.Sc. (Physics or Mathematics or Statistics) with 6 years experience in programming and implementation of Business Application Software. **Desirable** : M.E./M.Tech. with specialization in Business Administration/Industrial Engineering/Computer Science with experience in large scale programme development/design and data base administration and computer centre management.
(ii) Scientific Officer 'A' (1) Rs. 700-40-900-EB-40-1100-50-1300. To develop and maintain applications and/or system software for an in-house mini-computer system with extensive use of data base concepts.	I Class B.E./B. Tech./I Class M.Sc. (Physics or Mathematics or Statistics. Programming knowledge and experience in COBOL and Information System Design and management in areas of accounting, finance and inventory management.
(iii) System Programmer (1) Rs. 700-1300. Same as (ii)	I Class B.E./Tech./M.Sc. (Physics or Statistics or Mathematics) with 2 years experience. Desirable : Specialisation in Computer Science/computer applications/Application Programming.
2. DEPTT. OF ELECTRICAL ENGINEERING	
(Advanced Centre for Electronic Systems (ACES) Manpower Development Project in Microprocessors (MDM) Research Engineer 'B'/'A' (13) Rs. 1100-1600/700-1300. Depending on Qualification and experience, the candidate may be offered position 'B'/'A'.	I Class B.E./B. Tech. with specialization in (i) Design of Digital subsystems and interface to computers, microprocessor and related software. (ii) Electronic Circuit Design: Digital, Linear and RF, (iii) Signal Processing.
3. COMPUTER AIDED DESIGN (CAD) PROJECT	
Research Engineer 'B'/'A' (4) Rs. 1100-1600/700-1300. Depending on qualifications and experience, the candidate may be offered the position 'B'/'A'.	I Class B.E./B. Tech. in Mechanical/Civil/Aeronautical/Electrical Engineering with Computer Programming background or Computer Science.
4. LASER TECHNOLOGY	
Scientific Officer 'B' (2) Rs. 1100-1600. (i) To assist in the maintenance of and develop further the laboratory for metal and dielectric coating and to participate in the development of Laser mirrors.	(i) Ph.D. (Physics) connected with Optics/Laser/Thin-films or M.Tech. in Applied Optics. Three years experience in the preparation/utilization of multi-layer mirrors.
(ii) To participate in the development of existing and futuristic lasers (gaseous, dye, solidstate, metal vapour, semi-conductor etc.) or Optical Information Processing.	(ii) Ph.D. (Physics) with exposure to Lasers or M. Tech. in Applied Optics/Optical Communication. Three years experience in some aspects of Laser Fabrication/Optical Information Processing.
5. DEPTT. OF MECHANICAL ENGG.	
Equipment Design Cell (EDC) Research Engineer 'A' (2) Rs. 700-1300.	I Class B.E./B. Tech. with aptitude in Design and Production Technology.
6. DEPTT. OF CIVIL ENGINEERING	
Scientific Officer 'B' (1) Rs. 1100-1600.	Ph.D. in Biochemical Engineering/Biochemistry with experience in Environmental Engineering/Science and expertise in handling sophisticated analytical instruments. Research experience of 3 years with special reference to pathways in Biodegradation, Anaerobic Digestion and Immobilization of Enzymes for Industrial Waste Treatment.
7. DEPARTMENT OF PHYSICS	
Central Nuclear Laboratory Scientific Officer 'A' (1) Rs. 700-1300. To maintain the 2 Mev Van-de Graff accelerator and its associated electronic systems including data-acquisition system.	I Class B.E./B. Tech. in Electronics or I Class M.Sc. with 2 years experience in the field of Accelerator based Nuclear techniques in various disciplines, Nuclear Instrumentation and Computer Programming.

Designation, (No. of Posts), Scale and Function	Educational Qualification and Experience
8. INDUSTRIAL MANAGEMENT AND ENGINEERING	
Scientific Officer 'B'/'A' (1) Rs. 1000-1600/700-1300. To participate in Bio-medical Engg. research including Ergonomics and Instrumentation and will assist in teaching courses in Human Physiology and Life Sciences. Post offered depends on qualification and experience.	M.B.B.S. and M.D. (Physiology) or M.Sc. and Ph.D. (Human Physiology), teaching experience after postgraduate qualification and/or research experience as evindenced by publications. Non-practicing allowance is admissible to Medical Graduates as per Government of India rates.
9. INDUSTRIAL CONSULTANCY AND DESIGN CENTRE	
Liaison Engineer (1) Rs. 700-1300/1100-1600. Research Engineer (1) Rs. 700-1300/1100-1600. Post offered depends on qualification and experience. To liaise with industries and other organisations in identifying projects in areas where expertise is available in the Institute.	I Class B. Tech./B.E.; experience and aptitude in Liaison work.
10. GENERAL FACILITY	
Laboratory/Technical Superintendent (3) Rs. 1100-1600. (Number of positions likely to be increased).	Bachelor's degree in relevant branch of Engineering or equivalent with 6 years experience/3 years Diploma in relevant branch of Engg. or equivalent with 20 years of experience/ Expert Glass-blower, preferably a Graduate in Science, trained in a recognised Centre with 20 years experience.
Candidates not found suitable for Rs. 1100-1600 grade may be offered the lower position of Asstt. Workshop/Technical/Laboratory Supdt. in the scale of Rs. 700-1300.	Experience must be in Scientific Glass Blowing/Maintenance and up keep of Electronic Equipments and Computers/ Maintenance and running of Central Air-conditioning Plant/ Maintenance and Operation of Printing Machines including offset/Maintenance and Operation of Motor Transport Vehicles/Materials Management including Import Operations. In addition, the candidate must have proven managerial ability.

ACES, the research and development wing of the Department of Electrical Engineering, undertakes projects from various sponsoring agencies such as Ministry of Defence, Department of Science and Technology and Electronics Commission. The Centre has projects in the areas of Fibre Optical Communication, Radar Clutter, ELF Communication, Digital Signal and Image Processing and Instrumentation. Selected candidates may be assigned to any of the projects from time to time. Some may be Seconded to Centre for Laser Technology to work on Electronic subsystems connected with Lasers and Laser Systems.

The project for MDM is involved in the development of various Microprocessor based Systems for Microprocessor Laboratories both hardware and software, using a variety of B-bit microprocessor, memory and I/O modules. The laboratory has excellent facilities such as three INTEL Microprocessor Development Systems, two Logic State Analysers, a Graphic Terminal and Plotter.

EDC provides assistance to researchers in Design and Fabrication of Mechanical Assemblies. In addition, in-house work is going on in areas of N/C machines, robotics and unconventional machining. The activities involve usage of microprocessors.

CAD project is being established through the joint funding of the Department of Electronics and UNDP. The Centre is in the process of installing a VAX-11 computer system with graphic terminals and plotters. This project will be responsible for development of software for engineering systems in the areas of Mechanical/Civil Engineering and Fluid Flow.

The Industrial Consultancy and Design Centre promotes the transfer of technology developed in the Institute to the industry, solicit, negotiate, prepare cost estimates, finalise agreements and monitor projects sponsored by industry.

The posts of Research Engineers 'B'/'A' Scientific Officers 'B'/'A' Liaison Engineer and Research Engineers are for an initial period of three years, and may be extended by three more years. After satisfactory completion of six years of continuous contractual service, the candidates would become eligible for consideration for permanent positions. Provisions are also exist for Research Engineers in ACES to undergo higher education in the Institute The rest of the posts are permanent.

The Posts of Data Processing Officer and Liaison Engineer are reserved for SC/ST candidates respectively.

Out of total posts advertised of Scientific Officers 'A' and Research Engineer 'A' eight are reserved for SC/ST candidates. In the event of non-availability of SC/ST candidates, the reserved posts would be treated as dereserved.

Besides pay, posts carry allowances according to Institute rules which at present correspond to those admissible to Central Government Employees stationed at Kanpur. Higher initial pay is admissible to exceptionally qualified/deserving candidates.

Candidates called for interview will be paid second class railway fare from the place of duty to Kanpur and back by the shortest route.

Applications must be made on prescribed form obtainable free of charge from the Office of Dean of Faculty Affairs, IIT-Kanpur by sending a self-addressed unstamped envelope of 25 cm x 10 cm size. Applications should be accompanied by a postal order for Rs. 7.50 (Rs. 1.87 for SC/ST candidates).

Applicants employed in Government, Semi-Government Organizations or Institute should send their applications through proper channel, else they should produce a 'NO OBJECTION CERTIFICATE' from their employers at the time of interview.

Applications should reach the office of Dean of Faculty Affairs, Indian Institute of Technology, IIT Post Office, Kanpur 208016 (India).

LAST DATE FOR RECEIPT OF COMPLETED APPLICATION FORM : MAY 31ST 1984.

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University News

MAY 8, 1984

Re. 1.00

The Chancellor of Andhra University, Shri Ram Lal, addressing the Convocation of the University. Prof. M.G.K. Menon, Member, Planning Commission, who delivered the Convocation Address and Shri V.P. Rama Rao, Vice-Chancellor-In-Charge can also be seen in the picture.

CLASSIFIED ADVERTISEMENTS

KUMAUN UNIVERSITY
NAINITAL

Advertisement No. Affl./113

Applications for the following posts are invited by 10 June, 1984 on the prescribed form obtainable from the Registrar, Kumaun University, Nainital-263001, U.P. by sending a self addressed 9″× 6″ envelope and a crossed postal order/Bank draft of Rs. 5/- payable to the Finance Officer, Kumaun University, Nainital. Money order is not acceptable. Candidates who have already applied in response to the advertisement dated 27-5-81, 17-8-82, 4-8-81 and Advt. No. 898 dt. 22-8-83 for the post of lecturer in Zoology need not apply again. They may, however, send the latest addition to their qualifications change of address etc.

Sl. No.	Department	Professor (1500-2500)	Reader (1200-1900)	Lecturers (700-1600)	Specialization
1.	Economics	1 R	—	—	—
2.	Geography	1 R	—	—	—
3.	Chemistry	1 TLR	1 TLR	—	—
4.	Education	1 R	—	2 { 1 R 1 TLR	—
5.	Zoology	—	—	2 TLR	Fish biology preferable for one post
6.	Pol. Science	—	—	1 TLR	—
7.	Mathematics	1 TLR	1 TLR	—	—
8.	History	1 TLR	—	—	—
9.	Hindi	—	1 TLR	—	—

NOTE : R, implies regular (permanent), TLR, implies temporary likely to be regular.

Qualifications

1. **For the post, Lecturer Zoology & Political Science**

(a) a doctorate degree or research work of an equally high standard in relevant subject, **and**

(b) consistently good academic record with first or high second class Master's degree or an equivalent degree of a foreign university in relevant subject.

2. **For Lecturer in Education**

Either

(a) a doctorate degree in Education or research work of an equally high standard; **and**

(b) consistently good academic record with first or high second class master's degree or an equivalent degree of a foreign university in relevant subject.

OR

(a) a doctorate degree in any relevant or related discipline or research work of an equally high standard, **and**

(b) consistently good academic record with M. Phil. degree in Education or an equivalent degree of a foreign University.

3. **For Reader in Chemistry/Mathematics/Hindi**

(i) good academic record with a doctorate degree or equivalent published work, and active engagement in research or innovation in teaching methods or production of teaching materials; **and**

(ii) Five years experience of teaching or research including at least three years as lecturer or in equivalent position.

4. **For Professor—One each in Economics, Geography, Chemistry, Education/Mathematics/History**

Either

Eminent scholar with published work of high quality and active engagement in research and ten years experience of teaching or research and experience of guiding research at doctorate level;

OR

Outstanding scholar with established reputation for significant contribution to knowledge.

Further details regarding qualifications, service terms and permissible relaxation in qualifications will be provided with the application forms. Preference will be given to SC/ST and disabled candidates if otherwise considered suitable by the selection committee. Application form will not be sent by post after **31st May, 1984.**

B.N. Singh
REGISTRAR

DAYALBAGH EDUCATIONAL INSTITUTE
(Deemed University)

DAYALBAGH, AGRA-282005.
Advertisement No. 2/84

Applications are invited for the following posts:

1. Reader in Electrical Engineering (Preferably with specialization in power systems) : 1
2. Lecturers 16 posts
   - a. Electrical Engineering : 2
   - b. Mechanical Engineering (leave vacancy) : 1
   - c. Education (with specialization in any one of the areas: Home Science/Child Development; Drawing and Painting; Library Science) : 3
   - d. Commerce (Accountancy; Applied Business Economics; Business Administration) : 3
   - e. Agricultural Operations : 1
   - f. Rural Development : 1
   - g. Drawing and Painting : 1
   - h. Cultural Education : 1
   - i. Performing Arts : 1
   - j. English : 1
   - k. Botany : 1
3. Teaching Assistant (Mechanical/Electrical Engineering) : 2

Pay Scales : For posts : (1) Rs. 1200-1900; (2) Rs. 700-1600; (3) Rs. 850/- (Consolidated) — for graduates and Rs. 950/- (Consolidated)—for postgraduates.

Note

1. All posts carry allowances admissible under the Institute's rules.
2. Separate application form should be submitted for each post.
3. The number of posts may vary according to need.
4. SC/ST candidates, if found suitable, will be given preference.
5. Government or Semi-Government employees should apply through their employers or produce a no objection certificate at the time of interview.
6. Application forms along with full details of the qualifications for each post can be had from the office of the Registrar of the Institute on payment of Rs. 5/- with a self addressed stamped envelope.
7. Completed applications along with attested true copies of the certificates and the registration fee of Rs. 10/- should reach the Registrar on or before **31 May, 1984.**
8. All payments in respect of application fee or registration fee should be made either by cash at counter or by Crossed Bank Draft drawn in favour of "DAYALBAGH EDUCATIONAL INSTITUTE" on any bank at Agra, or by crossed Indian Postal Order drawn as above payable at Dayalbagh Post Office.

UNIVERSITY NEWS

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Editor :

M.S. RAMAMURTHY

A Study and Action-Oriented Project on Integrated Rural Development

1. Project Profile

The Karnatak University with the help of its own academic personnel has decided upon adopting a well-formulated and integrated research and action oriented plan of integrated rural development under its auspices envisaging sustained and perceptible improvements in the environmental, social and economic conditions of the target rural population. A list of programmes includes : the development of agriculture and animal husbandry, sericulture, mineral exploration, water resources development, water and soil testing, control of crop pests, fabrication of simple tools and equipments, improvements in housing, improvements in the availability of credit facilities, especially for the weaker sections, development of leadership, and also effecting the necessary attitudinal changes for a better participation and involvement in self-directed developmental efforts.

In rural development, we first discover an important strategy of social mobilization, and second, the realization that rural development is basically related to political and economic development. Thus rural development can broadly be understood as a distinct strategy meant to improve the economic and social life of a specific group of people. The delicate task of undertaking programmes of rural development can fully be appreciated in the light of a combination of extensive rural poverty and low levels of mobilizable resources.

There are two important ways in which scientists can play an useful role in accomplishing the task of rural development. The first is the meaningful task of preparing a scientific balance sheet of the developmental assets and liabilities of a selected rural area in order to identify the developmental opportunities that exist, and the bottle-necks that have to be initially removed. The final task of the scientists is in the direction of converting these developmental opportunities into a system of economically feasible and socially purposeful projects.

There is need for a proper operationalization of the concept of development so that we are not completely lost in rhetorics. Many attempts have been made at operationalizing this much-used concept. But we will be content with a straightforward definition provided in a scholarly work by Rogers and Shoemaker: "Development is a type of social change in which new ideas are introduced into a social system in order to produce higher per capita incomes and levels of living through more modern production methods and improved social organization".

Obviously, development should imply the liberation of man from the vicious circle of poverty, ignorance, malnutrition, disease and dependence thereby enabling the people concerned to become aware of new horizons of individual and collective existence. Without the participation of the people in these decisions that affect them, those who administer the development programmes can only excel in a rich initiative exercise.

2. Study Programme

The first stage of this study and action oriented project of rural development is a programme of studying the target population in order to gain a comprehensive understanding of the social, economic and ecological conditions under which the target population is actually found. It is proposed that the study will have the household as the unit of study. For this purpose a separate household schedule will be used. The main objectives of the study programme would be :

(a) To seek an understanding of the social and economic conditions of the target population. (b) To assess the existing physical resources of the communities under purview and the extent to which they have been utilized. (c) To assess the specific occupational skills and manpower resources which the communities possess and the extent to which these resources are actually utilized. (d) On the basis of the above, to assess the potentialities for development in regard to physical resources as well as human resources which the target groups possess. (e) To draw up specific programmes of development which will be meaningful in terms of sustained development of existing potentials.

It is proposed to organize a student volunteer force of about 30 students and at least 6 research scholars who would involve themselves actively in the various aspects of the study and action project. The research scholars will be useful in providing the necessary leads in the execution of the project and to monitor the project at various stages in order to maintain the necessary co-ordination, continuity and direction. Essentially, each of the student volunteer teams would comprise five students and a research scholar under the guidance of teachers. These teams will be associated with the project right from the initial stage of preliminary studies and investigations.

3. Target Area

The target area comprises a cluster of six villages in the vicinity of the University. These villages are :

(i) Salakinkoppa (ii) Baad (iii) Nigadi (iv) Benakanakatti (v) Mansur and (vi) Mangundi.

These six villages together comprise nearly 1300 households with a total population of about 10,830. This is considered to be a viable unit for taking up a study and action project of rural development.

4. Objectives of the Project

The main objectives of the entire project are : (i) to identify the needs of the target population in terms of the existing ecological, social and economic conditions, (ii) to assess the existing community resources and potentialities meaningful for development, (iii) to assess the extent to which the government and other agency-sponsored developmental programmes are implemented or in the process of being implemented in the area concerned in order to identify the area where new thrusts could be introduced; (iv) to activate people involvement and participation in developmental efforts in order to enhance the self-directed efforts towards development on the part of the target population.

5. Approaches to Rural Development

On the basis of survey data and other information obtainable from the governmental and other agencies, specific action oriented programmes in some selected substantive areas will be drawn up for execution. These programme proposals will necessarily have to be in the format of a profile providing necessary information about the nature of the whole programme, the possible targets to be reached, the duration of the programme, the agencies to be involved, and an estimate of the possible financial outlay.

6. Programme Profiles

In order to provide meaningful direction to the entire project, it is necessary to project specific Programmes as proposals that can be supplemented and modified, as need be, after obtaining the actual data from the study programme. Preliminary visits have already been made to the villages, and contacts have been established with local officials connected with the development administration.

The following are the programme proposals:

(A) Forestry Programme (Social Ecology)

The task group consisting of personnel from Botany and Zoology Departments will make an assessment of existing forest resources and plant wealth in terms of its utilization for household use, as also for the support of livestock. It will also make an assessment for the development of specific plant species useful for domestic fuel, house construction, industrial use and for the provision of green manure.

The task group will formulate specific programmes, perhaps with the help of the Forest Department, and the Department of Agriculture, for the development of plant wealth and forest resources with estimation of targets to be reached. The profile of programmes will include information on viable units of development, location, and an assessment as to how the local resources could be matched with outside assistance. It may also include an estimate of financial outlay required, duration of programme and personnel required.

(B) Soil and Water Conservation Programme

One of the important tasks of this group comprising personnel from the departments of Geology and Geography is to assess the quality of the soil and its suitability for specific uses including agriculture. For this purpose, an intensive programme of testing of soil samples may have to be undertaken. A kind of geological mapping and also the preparation of detailed contour mapping will have to be done. The possibilities of mineral exploration in the local area will be assessed.

Another important task is to assess the availability of ground water resources, and also an estimation of surface water resources can be made. The possibilities of digging wells for domestic use as well as for lift irrigation may be estimated with information on location, number of feasible wells, and the degree to which water availability could be augmented.

Specific programmes may also pertain to improvements in drainage, bunding requirements in agriculture etc. can be projected.

The needed financial investment, the personnel required, duration of programmes, etc. may be indicated.

(C) Agricultural Programme

One of the important tasks of this group with personnel from the departments of Economics, Anthropology and Gandhian Studies is to assess the existing agricultural practices and the level of agricultural productivity. Details of the cropping pattern will also be taken note of. The nature of agricultural inputs and labour inputs will have to be assessed. It is necessary for assessing the existing marketing facilities.

The programme will concern itself with the possibilities of diversification of cropping pattern, improvements in the productivity of land and labour, water management, horticultural development, improvements in storage and marketing etc.

An estimate will be given as to the financial requirements, duration of the programme, the personnel required, and the targets that could be accomplished etc. will be indicated.

(D) Animal Husbandry Programme

One of the essential tasks of this group with personnel from the Department of Zoology, is to assess the existing animal husbandry practices, including the breeding practices. The team will assess the potentialities in respect of the development of animal husbandry, like poultry, cattle development etc. A major breakthrough in the development of animal husbandry can be achieved through better breeding practices, and through introduction of necessary infrastructural facilities like new animal feeds, animal fodder etc.

Appropriate programme of animal husbandry development will be drawn with estimates of expenditure, duration of the programme, personnel required, location etc.

(E) Village Organizations Programme

One of the essential tasks of the group consisting of personnel drawn from the departments of Political Science and Psychology and Education is to survey the existing village organizations, and the orientations of the people concerned toward these organizations. The task group will also identify the local leadership, its characteristics, and its functioning. A study of existing attitudes towards development prevailing among different categories of people, and an analysis of group dynamics in the local area with a view to minimize local conflicts and factional animosities will gain significance in the present context.

Taking into consideration the prevailing cooperative efforts towards economic and social amelioration, programmes will be formulated for the development of appropriate orientations and attitudes towards development, and also for the development of leadership especially among youth and for the extension of leadership functions for the accomplishment of goals of rural development. The task group will initiate programmes for the development of collective effort in the direction of child welfare, youth welfare, women welfare, and adult literacy. The local school as a central institution will have to be strengthened.

The estimates of expenditure, duration of the programmes, location, personnel required and the like will be indicated.

(F) Alternate Energy Programme

With personnel drawn from the departments of physics and chemistry, this task group will assess the existing energy resources for domestic use as well as for agriculture as well as other economic pursuits. One of the essential tasks of the task group is to identify the energy requirements of the target population and to assess the potentialities for the development of new energy forms, especially for the encouragement of new agro-based industries and other economic pursuits.

Programmes will be formulated to include the conservation of existing energy and water resources, and the development of new energy resources. New uses to which energy resources can be applied will also be indicated.

An estimate of expenditure, the extent of new infrastructural facilities needed, the requirements of personnel, duration, etc. will be made.

(G) Self-Employment Programme

One essential task of the task group which will comprise personnel drawn from the departments of Social Work, Sociology and Education is to identify the existing skills with due attention to the existing types of village industries and village crafts. How far the existing skills are traditional and whether there are attempts to acquire new skills may be assessed. Further, the source of raw materials, the process of production, labour employed, marketing facilities for the goods produced etc. will be assessed.

In the light of the potentialities for the development of new skills, appropriate programmes will be drawn for the development of new skills, and for rationalization of production and marketing in respect of existing crafts and trades, with precise estimate of expenditure involved, personnel requirements, duration and possible assistance from government sources.

7. Duration of the Entire Project

In the first instance, the duration of the Project will cover a period of two years extending upto 1985. The budget estimates provided in this Project Profile cover this entire two-year period till the end of calendar year 1985. In terms of financial allocation, it will cover three financial years, namely, 1983-84 to 1985-86. The total estimated expenditure is Rs. 2,36,500. □

The University-Industry Partnership

T. Vasudev*

The relationship between Universities and industries is interdependent and mutual assistance oriented. The University education apart from developing certain qualities like training for citizenship, inculcates the ideas of fraternity, patriotism, world citizenship, intellectual · analysis, imaginative insight and integrated way of life in the minds of youth. It should be need-based and production-oriented. As such, training the personnel for remunerative and meaningful employment is one of the goals of University education.

The industrial sector of any country has to depend upon the university for its personnel requirements and solutions for specific practical problems. The Universities are expected to make substantial contribution by way of procedure of evolving more rational forms of organisations and more satisfactory conventions of eradicating the old and bad habits, culture and traditions and developing new political, administrative and managerial skills. They have to rely on industrial sector to impart fruitful practical frame work of skill to various fields of students. The success of University industry partnership depends on the quality of styles of partnership on various matters that are mutually connected.

This paper is proposed to putforth certain ideas about the areas of partnership between the industry and university in the context of developing countries particularly like India. Further, it focusses emphasis on infrastructure and other problems which are to be tackled in proper manner to build ideal partnership between university and industry.

Styles of University/Industry Partnership

The styles of mutual contributions of the University and industry could of course be direct or indirect and could be in terms of supply of trained personnel, innovative research into the problematic areas of the industry and consultancy services.

Supply of Trained Personnel

Industries often require a wide range of skills—professional and managerial—ranging from Managers and administrators, economists and lawyers, scientists, technologists, engineers, middle level executives, accountants and marketing personnel and transporting men to foremen and other skilled workers. As such the university, where people receive the education (It can be defined as human investment and human resource development) has the prime responsibility of making available to the industry the appropriate form of knowledge and quantity and quality of skilled personnel who will be capable of organising the whole range of complex functions in industrial sector, where the technological progress is supposed to be taking place. In other words it is expected from universities that an outflow of well trained people should take place in sufficient number as per the periodical assessment of present and future personnel needs. Undoubtedly this necessitates the mutual support of both i.e., university and industry. The universities are to be equipped with adequate physical facilities, competent teaching staff and appropriate curriculum to instil in them the required knowledge of specialised skills whereas industries should allow them to have sufficient job training during their course of tenure before they are actually placed on the jobs. This type of partnership necessarily helps the students to be successful in their future as it inculcates in them the necessary theoretical framework (from universities) and practical training (from industry) which are required for a particular position.

The analysis of university/industry partnership with regard to supply of trained personnel reveals that there is no coordination between outflow from universities and quantitative and qualitative personnel requirements of the Industry. The style of functioning in Indian universities is neither need-based nor based on the skills of individuals. The outflow of personnel from Universities are more in number, not suitable for direct employment as per the requirement. Thus, this approach of university output and non-cooperation of industrial enterprises for providing training facilities while they are studying lead to wastage of limited resources on futile aspects causing frustration and unemployment. In other words due to imbalance between outflow and needs, the situation has lead to devaluation in education. A fundamental factor causing devaluation was found to be excessive supply of the particular type of education in relation to demand. Hence the straight forward remedy to devaluation appears to be to bring about the equilibrium between the supply and demand. This needs either restricting the outflow from universities or increase the capabilities of industries to absorb more personnel. Thus the situation calls for the attention of industrialists and universities for fruitful and efficient utilisation of available meagre resources. In this connection I feel that the personnel requirements of particular university jurisdiction be assessed scientifically on the need based and the outflow from that university should be in conformity with the assessment.

Research

The second area where university and industry share for their mutual benefit in upgrading their standards is through the conduct of research.

**Vice-Chancellor, Kakatiya University, Warangal.*

Research is needed both at preplanning stage for correct programming and at the post operation stage for follow up action and evaluation. It should serve to make higher education relevant to the socio-economic conditions of the country. The success of this function depends upon the mutual cooperation and coordination between university and industry.

The survey into university/industry partnership with regard to research reveals that there are certain instances of inviting the university academic staff to study on specific areas of their organisations. Mostly these type of surveys and probs are with non-financial commitment on the part of industries. The other type of mutual assistance in this area is donating chairs by certain industrial establishments to the University departments for doing research on specified field for a certain period. Some times the industrial establishments or government sanctions certain amounts to science and engineering departments in the form of a project to inquire, experiment and find out solutions in a particular area.

Though there are number of instances of such a kind of partnership between university and industry it is only informal and depends upon the confidence which the industry poses in university. Many instances reveal that the industries prefer professional institutes to universities in seeking guidance.

Consultancy Service

In view of the shortage of skilled managerial personnel, consultancy service with universities is really useful to the industries.

Consultation is needed for feasibility study and preliminary planning of new projects. Specific problems on a particular technical aspect can always be referred to a specialist on the subject. A well staffed university department should be too glad to be given a chance to do an impartial evaluation of any general or specific operational aspects for industries. Professors could always serve as board members or consultants on technical or managerial issues. They could be invited to act as part time trainees and leaders of training courses participate in or help organisation.

It is also most desirable to provide adequate incentives for greater mobility of staff exchange between the universities and industries. Senior Managers with adequate academic qualifications should be encouraged to deliver the lectures and participate in other activities of the universities. Alternatively opportunities for acquiring relevant experience should be offered to university faculty members through periods of attachment in business or industry. By this way both the academic and industrial executives could exchange, interact and cross fertilise their technical expertise and findings, their customs and insight for mutual benefit. Together they can promote basic and applied research essential for developing a philosophy of management and substantive knowledge that is pertinent to the socio-cultural setting of the country. They could cooperate to translate national needs into educational objectives, determine the most efficient university structures and make curricula and syllabi relevant and more responsive to economic development and social changes. Such arrangements could certainly help to integrate higher education planning into manpower developed programmes to bridge the gap that, at present, isolates the universities from urgent national concerns.

It can be concluded that there is a greater need to promote the university and industry partnership for the meaningful growth and development of the country. ☐

Technology
Information Service
15 JUN 1984
MYSORE

New Campus of Post-Graduate Centre of Mysore University

President Giani Zail Singh laid foundation stone of the new campus of the Post-Graduate Centre of Mysore University at Davangere on 10th April, 1984.

The Post-Graduate Centre at Davangere is the second such Centre of the University of Mysore, the first being at B.R. Project, Shimoga.

Laying the foundation stone for the new campus, the President observed that politicians, educationists and teachers should desist from making use of the students for unacademic activities. On the other hand, he stressed that they should work for improving the academic standards. He called for minimising the importance of examinations and to re-organise the courses, for helping the all round development of students.

Shri B.D. Jatti, former Vice-President of India said on the occasion that Davangere, as industrial and commercial city, had all facilities and an atmosphere for a full-fledged University.

Shri Ashok Nath Banerjee, Governor of the State and Chancellor of the Universities in Karnataka who presided, hoped that industrialists and philanthropists of the area would come forward to contribute generously to make Davangere Centre into a full fledged University.

Union Minister of State for Railways Shri C.K. Jaffar Sherieff, State Labour and Wakf Minister, Shri Azeez Sait, and Power Minister Shri J.H. Patel attended the function.

Professor K.S. Hegde, Vice-Chancellor of the University explained the plans of the University for the Post-graduate Centre at Davangere. ☐

Prof. Menon Addresses Convocation of Andhra University

Excerpts from the convocation address delivered by Prof. M.G.K. Menon, Member, Planning Commission, at the Andhra University, Waltair on March 1, 1984.

Convocation

“...Those of you who are taking their degrees today have worked and been trained in a variety of disciplines that characterise the education system: in the arts and humanities; in science, technology, engineering and medicine; in commerce; in law; and many associated areas. Some of you will go on to use your training in a direct way, for professional activities through which you will earn a living; these professional activities will call for the information, techniques and skills that you have acquired; this is not the primary role of a University, but only an incidental one. Others will not use in a direct way, for their professional future, information they have acquired. But what should characterise all of you are the basic intellectual qualities, to reason, to analyse, to deduce, and to function in an objective and rational manner. For, it is the primary role of the University to provide an environment of learning and scholarship, to enable deep intellectual interactions with your peers and teachers.

“Essentially you are the product of the university system which represents the apex of the pyramid of learning. The lower part of this pyramid consists of the school and college systems, which cover primary, secondary, technical and vocational education. Then there are the purely professional universities, like the Agricultural Universities. And there are other aspects of the education system, such as adult education, non-formal education, professional schools such as in music and dance, etc. All of this is embedded in society; and cannot be divorced from the aspirations and expectations, the prejudices and conflicts, the value systems and methods of functioning, etc., that characterise society. Thus, the educational system of the Vedic times was characteristic of society in Vedic times. In the half century prior to Independence, there was a spirit of elan; of modernisation; of the struggle being waged through the great moral force of non-violence and magnanimity, to win freedom from the largest empire then on earth: this spirit in society permeated the Universities also. So, when many speak to me of the ills and problems in Universities, I ask them to look at society around — can the Universities be islands insulated from the society of which they form a part? And yet, I believe that the leadership, to move forward to create a better society, to bring out the inner strength of our people which has enabled them to remain dignified and to hold their heads high in the midst of adversity and poverty, this leadership must come from those privileged to be educated.

“Those of us who have had the privilege of such higher education, and to emerge from the portals of universities and similar institutions, represent only a very thin crust, and a small fraction, of our society, like the tip of an iceberg. Each one of us, who has been given this opportunity must regard himself or herself as a very fortunate individual. We should not regard ourselves as a privileged or elitist class in society. We should be humble and grateful for the opportunities that have been given to us, that a very large part of our brothers and sisters have not had. We, therefore, carry some special responsibilities towards our fellow human beings.

“I cannot claim this University as my Alma Mater. I am, however, aware of the great traditions of scholarship that have characterised this University over the relatively short period that it has been in existence. Its founder was the great C.R. Reddy. It has been privileged to have the late President of India S. Radhakrishnan, as a teacher and Vice-Chancellor. C.R. Reddy enlisted the services of that outstanding scientist, C.V. Raman, for building up the Faculty of Science & Technology. C.V. Raman was Honorary Professor and Chairman of the Faculty of Science & Technology. One has only to recall the names of S. Bhagavantam and Nagendra Nath in Physics, T.R. Seshadri in Chemistry, Meenakshisundararam, Ramaswami and Vijayaraghavan in Mathematics, and V.K.R.V. Rao in Economics to see the eminence of its Faculty. Andhra University can take pride on the cosmopolitan and all-India character of its teaching staff in the past. Humayun Kabir was on its Faculty.

“May I remind you that this was also so in the case of our other universities when they were truely great. Ashutosh Mukherjee, the great Vice-Chancellor of Calcutta University, selected C.V. Raman to be the Palit Professor of Physics at that University. S. Radhakrishnan was Vice-Chancellor of the Banaras Hindu University. T.R. Seshadri moved to Delhi University to set up its well known Department of Chemistry. In each case the individual was regarded as an Indian, no matter which part of the country he came from. It was in this atmosphere of true respect for learning that the greatness of our educational institutions in the past lay; rather than an atmosphere of parochialism, communalism, theories of the "sons of the soil", narrow mindedness, and the inbreeding these lead to, which unfortunately are characteristic of so many of our institutions today. I hope each one of you will remember these traditions of your Alma Mater, and go out into the world imbued with a spirit of broad mindedness, magnanimity and the secular outlook

"In speaking to you today, I thought I would share with you a broad perspective of the development of our country since we became Independent, and focus on some of the major over-riding issues that confront us today. It is in finding solutions to these issues that the highly educated, university-trained classes of our country have special responsibilities to society around.

"In the first half of this century, until Independence, the Indian economy basically languished, with the national income growing at 1.2%, agriculture at 0.3% and industrial production at 2%. There were many major famines in India in the century prior to Independence, of which the major one close to Independence was the Great Bengal Famine, during the Second World War. Since Independence, and the introduction of planning on a national scale, new impulses have been given to the national system for growth and development. For over three decades there has been an overall annual real growth of 3.5%, based on a 2.5% to 3% growth rate in agriculture and over 6% in industry. The per capita income has gone up by 50% in real terms over this period.

"There are many other basic economic indicators. India's rice production in the last 30 years has increased from 23 to 54 million tonnes; wheat production from 6.6 to 36 million tonnes; and sugarcane production from 56 million tonnes to 176 million tonnes. India is now the world's largest producer of sugarcane, the second largest producer of rice and the fourth largest producer of wheat. The total foodgrain production this year is expected to touch 143 million tonnes, the highest ever. A very large part of what is needed in the country is made in the country. This includes clothing, construction materials, transportation systems, communication systems, chemicals, power generation equipment, consumer goods of various types, etc.

"At the time of Independence, the small industry that existed was based on individual examples of exemplary entrepreneurs. It was mainly restricted to textiles and certain basic extractive sectors. Today, India is one of the major industrial nations of the world.

"In one of the most advanced and sophisticated areas of science and technology, that of nuclear energy, India has a comprehensive range of capabilities, covering the entire nuclear cycle, from exploration, mining, extraction, purification and conversion of nuclear materials, production of fuel elements for reactors, the design and construction of power reactors and their control systems, production of heavy water, health and safety instrumentation, reprocessing of spent fuel and waste management, etc. Only last year an indigenously designed power reactor at Kalpakkam was commissioned, with all of its major elements fabricated within the country.

"With the orbiting of the Rohini Satellites using indigenously designed and developed Satellite Launch Vehicle systems, the positioning of a complex geo-stationary Satellite INSAT-1B for operational use relating to tele-communications, radio and TV broadcasting and remote sensing, and the building of a series of satellites from Aryabhata to Bhaskara, Rohini and Apple, India has achieved capability to move within a decade to its own operational space systems for regular use.

"In the area of health, the nation has traversed a long distance since Independence. The death rate has been reduced from 30 per thousand to 13 per thousand. This is principally due to the elimination of small pox, the control of several communicable diseases and improved nutrition. The birth rate has been brought down from 42 in 1960-61 to 32 per thousand currently; this is of great significance from the viewpoint of stabilisation of population. The expectancy of life has increased from 32 years in 1947 to 52 years in 1982. Infant mortality has been reduced to 125 per thousand live births, though this is still a very high figure. All this clearly indicates that poverty, malnutrition and disease are being overcome and controlled, though not at the rate at which we would like them to be. These, in my view, are better indicators of development than many economic indicators such as the poverty line where significant ambiguities in interpretation.

"In the areas of science and technology there have been achievements in electronics, oceanography, industrial research and so on which I do not have time to go into.

"I have briefly indicated some of the transformations that have been achieved in a little over three and a half decades since Independence; we have reason to be proud of them. These are our achievements in a country of sub-continental dimensions, following an open and free system of parliamentary democracy. All this has been possible because one has attempted to carefully husband the available resources and use them on a planned basis through the system of Five Year Plans.

"The country has also exhibited a remarkable stability, in spite of many situations of crisis such as; the hostilities of 1947, 1962, 1965 and 1971; the deteriorating security environment around the country; natural calamities such as droughts and floods; the twenty-fold increase in the prices of imported oil over the past decade; the deteriorating climate in international trade with the building up of walls of protectionism in the developed countries, reduced availability of foreign assistance, etc. Apart from steady progress in its own development, India has established its reputation for trust and creditworthiness in international financial transactions.

"It is important to look at the picture on such an overall basis to see how far we have come, for only that will enable us to move with a sense of confidence into the future to confront the tasks that lie ahead. I believe that it is necessary to combat the need of cynicism and pessimism that many seem to exude. Such a mood and approach can only lead to despair and an inability to face the situation. What we need is confidence, courage and integrity?

"All that I have said above does not mean, however, that the entire picture relating to the state of the nation and the development process is a rosy one; and that everything hoped for has been achieved—far from it. We still are a very poor country, in terms of the per capita national income of around 2000 rupees per annum. We have a long way to go in the removal of poverty and in providing a good life for all our people. This requires continuing growth, but it must be accompanied by social justice. These are two of the main objectives of the current Sixth Plan; the other two main objectives relate to self-reliance and modernisation.

"What gives me confidence for the future, that these objectives can be achieved, is the fact that we have human raw material as fine as can be found anywhere on earth, and that developments which have taken place in science and technology, and the further progress that undoubtedly will take place, are capable of providing us with solutions concerning most areas, such as industry, construction, transportation, communication etc., that are of importance in the development process, without our necessarily having to go through the pathways which the developed countries of the world have gone through. This will enable us, and I use here the hackneyed phrase, "to leapfrog into the future".

"However, there are certain areas that are of deep concern to me, where we have a battle against time namely; the continuing growth of population of just under 2% per annum at present, as a result of which all our growth is nullified to this extent; the necessity to grow enough food on a guaranteed basis for the growing population; in the energy, scarce economy of the future half a century; the problem of water in the long run for drinking, agriculture, industrial and other purposes; the question of availability of adequate energy, and reducing the dependence on the present non-commercial forms of energy which are damaging the environment; and most important, aspects relating to the development of our rich human resources through education, nutrition, public health and moral leadership since this constitutes the most important form of capital for development, namely, human capital. I shall deal with these questions in the remainder of this address.

Population

"In the world as a whole, we live today in an unique period of pressure, in terms of the increase of population. The population of the world was around one billion in the year 1800. It doubled to 2 billion by 1925 and to 4 billion by 1975. It is expected to be around 6 billion at the end of the century and 8 billion by 2025. The world population would perhaps saturate around 10 billions.

"With regard to India, the Census of 1981, indicated a population of 685 million. The present growth rate is just under 2% per annum. We could expect a population of 1000 million by 2001 and about 1375 million by 2031. The increase in population exerts a pressure on all resources and clearly reduces the impact of various efforts at development. To ensure a better life for those who exist and for those yet to be born, it is essential that there is a conscious and disciplined approach to control population using all available approaches.

"Fertility control needs the participation of society as a whole. India was one of the earliest countries to adopt family planning as national policy. The approach of Government in this matter has been to create awareness, to rely on education to bring about attitudinal and behavioural changes in favour of family planning, and to provide the necessary facilities; actual decisions and action has to involve society on a voluntary basis.

"It is very important that the educated classes of the country recognise the seriousness of this problem and contribute to creating an awareness concerning the imperative need for population stabilisation. They have an important role to play in creating a favourable climate for population planning. Often, narrow and petty considerations are brought up against the need for population stabilisation; for example, that it will jeopardise the advantages of caste or religious groups. But it is those who can reason logically, who will see the imperative Dynamics of an exponential population growth and its implications for their own well-being as well as that of the nation. And it is they who will have to spearhead the movement to limit the population.

Water

Most people take water for granted. Those who live in severely drought-stricken areas or those who have seen the fury of floods, will take a somewhat different view. We must recognise that water is an important and critical resource for human survival. It is, of course, a resource which is never lost and which is amenable to recycling. The important point to bear in mind is that it must be available where it is needed. Thus the very large amount of water in the ocean is not useful for drinking, agriculture or industry except at great cost in energy. The sun, of course, transports this water to the land mass where it precipitates as rain or snow. It is the water which is precipitated that we have to husband carefully. Water usage must be classified so that the type and purity of water is matched to its end use. It is thus not optional to use drinking water for agriculture or industry. With the characteristics of precipitation in our country and the damage to top soil that heavy rain and run off often create, we have to increasingly work on land contouring to store and to control water flow. Excess water in certain seasons can also be stored in the land mass acting as a sponge; and extracted through pumping when required, possibly using renewable forms of energy such as solar energy, wind energy, biogas, etc. The availability of water and the lack of safe drinking water in many parts of our country is already a serious problem. Work on exploring for water and studying the hydrological cycle needs to be intensified. Water must be regarded as a national asset to be used optimally for the benefit of Indian society as a whole. We will need to work out strategies for the area of water right now if we are to avoid problems in the decades ahead with the large and growing population.

Food and Agriculture

"Food is humankind's first need. Globally, the position with regard to food production cannot be regarded as satisfactory. Today more than 100 countries of the world need to import food, principally from North America and Australia. Somewhat like the dependence on oil from the Middle-East, there is an increasing overall dependence on food from North America and Australia. Clearly there is need for a greater degree of self-sufficiency in various parts of the world.

"With regard to India, there has been a radical transformation on the agricultural scene in the last 20 years. In the mid-sixties India was a major food importer. But in the period that has gone by, largely through the introduction of high-yielding varieties, and supporting strategies, the country has become more or less self-sufficient and has clearly the potential to continue to be so. Edible oils constitute the single major item of food import—where self-sufficiency has not been achieved, but can be in the near future.

"Other problems in this sector relate to storage and distribution and cutting down losses that are estimated to be as high as 20%. There is also the problem of creating buying power in those sections of society who at present do not have the wherewithal to pay for their needs. It is the hungry who need food most; and they are the ones who are poor and are unable to buy. It is thus that we come face to face with the stark need to create gainful employment.

"Historically, as populations grew, food production was enlarged by increasing the area under cultivation. In India this possibility does not exist to any significant extent. In fact, we have to contend with the degradation of agriculturally productive soil through erosion by wind and water, and through water-logging and salinity; as also loss of arable land through conversion for other usage.

"The recent increases in food production have come about through increased irrigation, fertiliser inputs and new varieties of seeds which ensure repatterning of dry matter production so that more grain becomes available. There is considerable scope for increased food production in India through this approach taking note of large parts of the country where high yields have not been attained. However, one must remember that present agriculture is energy-intensive, and heavily based on oil which is a non-renewable resource. There is clearly need to increase photo-synthetic efficiency to ensure actual increase of dry matter (rather than just repatterning of existing dry matter) and also to be able to increase the ability of plants to fix nitrogen on their own.

"We must remember that this country has solar energy in abundant measure. It has also significant precipitation, though a large part of this is in the form of heavy precipitation and, therefore, demands measures for water storage and control to ensure its optimal use. We have also to make food production relatively insensitive to the fluctuations and vagaries of weather. These are some of the areas that pose a challenge, both in terms of basic science as well as in taking scientific results to the field.

"Agriculture represents a very complex system in view of large number of parameters involved, and the fact that it is practised by such a large part of society. It also constitutes an important area for gainful employment related to post-harvest technologies as well as associated areas of poultry, dairying, fish farming, silk-worm rearing, cottage industries, and so on. While Government has certainly a role to play in terms of research and provision of extension services as well as in aspects relating to finance, availability of inputs, etc., a very large part of the initiative and effort in the field involves society as a whole. India's economic stability has owed largely to self-reliance and self-sufficiency that have characterised its agriculture. This wlll continue to be so. This is an area of great promise for self-employment and enterpreneurial initiative; and if successfully developed as a whole will lead to a slowing down of the magration from rural to urban areas.

Energy

Everyone is aware of the great importance of energy for life and development: to grow food and to cook it; to keep warm; for industry and transportation, etc. There is a direct relationship between per capita energy consumption and the standard of living or per capita national income. At the upper end of the spectrum, such as at figures of 11,000 kg. of coal equivalent per capita, characteristic of energy consumption in North America, there is a great deal of unnecessary or wasteful consumption. But at the lower end such as in India, with a figure of 190 kg. of coal equivalent per capita, it is absolutely clear that energy availability has to be significantly increased to ensure a meaningful quality of life and for development. There is, of course, need always for conservation and for optimal utilisation of energy that is produced.

"Energy has throughout received priority attention in Indian planning. Thus, from an installed capacity of 1360 MW at the time of Independence, there will be about 44,000 MW by the end of the Sixth Five Year Plan in March 1985. The per capita consumption of electrical energy has increased from 15 KWH in 1951 to 150 KWH at present. There is need to increase this to about 1,000 KWH at a rate of growth of 7 to 8 per cent per annum; this would mean a capacity of between 1,00,000 to 1,30,000 MW by the year 2000. In terms of investments, out of a total outlay of Rs. 97,500 crores for the Sixth Plan in the public sector, the total allocation for energy, including the sectors relating to coal and oil is Rs. 26,535 crores, or around 25%.

"An important point to bear in mind is that non-commercial energies constitute about 44% of total energy consumed in India. These are fuelwood, animal dung and agricultural residues. It is true that there has been a shift, with time, from non-commercial to commercial energy, in their percentages in the total consumption of energy. But the actual magnitude of non-commercial energy in use has gone up significantly. The increased consumption of fuelwood has led to serious destruction of forests and other vegetative cover. Animal dung used as fuel would otherwise be available as valuable organic manure; and agricultural residues for various structural and industrial applications.

"In recent years the use of oil has also gone up significantly, to the extent that it is today almost half of the commercial energy that is used. India imports about one-third of a barrel of oil per person par day which is very small. But with its large and growing population, and the increase in price by a factor of roughly 20 over the past decade, this has constituted a tremendous burden on India's foreign exchange outflow for this one item alone. The rapid development of indigenous oil production has certainly helped to keep this outflow of foreign exchange to manageable proportions. But with limited world reserves, leading to problems of both availability and likely increases in price, and limited per capita domestic reserves for its needs, the increase in oil utilisation will have to be slowed down.

"It is not my intention to go into the detailed aspects of the energy scenario, such as those dealing with sectors of coal, hydro electricity, nuclear power, and so on. What I would like to do is to point out that we are faced with certain fundamental issues relating to:

(i) the need to increase rapidly the per capita availability of energy from the present very low levels;

(ii) how to substitute the present non-commercial forms of energy, particulary through the newer non-conventional renewable energies; and

(iii) how to find the resources needed to provide the energy required.

"It must be remembered that energy is one element of the infrastructure that cannot really be imported on any scale for a country of India's population and needs. Self-reliance and a significant degree of self-sufficiency is clearly called for. What is important is to recognise the urgency of the problem. We have no time to lose, since energy holds the key to development.

Human Capital

"India as a country is abundantly endowed with natural resources. Of course, in terms of per capita availability we may be lower than some other countries of the world on individual resources, such as oil, coal, arable land, etc. But overall, we are well placed.

"We have made investments in the past to convert these resources to wealth. Through this we have indeed achieved results, as I have earlier indicated. But somehow we seem to have under estimated the importance of human capital. It is the human being, educated and trained, who is the key element in the production of wealth. The other important elements no doubt are natural resources, energy, and information. But these latter can even be obtained in large measure from outside; and if one can convert them on a highly productive basis into wealth then one can pay for importing them. Thus Japan is a classical example of a country which has achieved its present high economic standing through the capability of its human resources, which have enabled it to utilise energy and materials in great measure and information to a more limited extent obtained from outside. We should remember that Japan has had universal education since the Meiji restoration.

"Human beings, to become truly effective human capital, have to be trained and educated, and to develop skills. This demands investments in education. There is also need for investment in public health and nutrition. Even though in our Constitution it is stated that within a period of 10 years, free and compulsory education would be available for all those up to the age of 14 years, we are now hoping to provide this only by the year 1990. As a result, though the level of literacy in the country has gone up from around 17% in 1951 to about 36% at present, it is sad that about two-thirds of the country is still illiterate; and with the growth in population there are more illiterates today (438 m) than they were in 1951 (300 m). Each one of us who has had the opportunity of being educated, has a special responsibility to remove this bane of illiteracy that hangs over our heads. It is certainly within the capability of the educated, such as all of us assembled at this convocation, to initiate steps to set in motion a chain process, in geometric progression, which will wipe out illiteracy from the country.

"Our educational system, as constituted at present, deals largely with the formal aspects of transmission of knowledge and imparting of skills. Education, is more than that. It essentially involves acquiring the ability to think clearly for oneself and to be able to continue learning throughout life. It should lead to the growth and further development of the intellectual curiosity inherent in every human being. It is as important that it should enrich the character and provide a sense of values. Albert Einstein had once remarked: "It is essential that the student acquire an understanding of and a lively feeling for values. He must acquire a vivid sense of the beautiful and of the morally good. Otherwise he, with his specialised knowledge, more closely resembles a well trained dog than a harmoniously developed person".

"Unfortunately, in the expansion which has taken place in the education system, which is no doubt needed to cater to much larger members and fulfil societal aspirations, we have neglected the important aspects relating to; character-building; the creation of a sense of values relating to Indian identity, national integration; respect for human dignity; intellectual integrity; and courage of one's convictions. This country which won its independence with discipline and non-violence is today going through the throes of indiscipline and violence, inevitably in the name of petty causes, when much larger issues of great human significance confront us. It surely is the responsibility of the educated of this country to provide the leadership to turn back this tide.

"It is time that we dedicated overselves in spirit and in action to fulfilling Gandhiji's dream, "I shall work for an India in which the poorest shall feel that it is their country in whose making they have an effective voice, an India in which there shall be no rich class and no poor class of people, an India in which all communities shall live in perfect harmony. This is the India of my dreams". This may seem an Utopian dream but we may recall what the great French scientist Pierre Curie said concerning the true motto of a scientist.

> "To make of life a dream and to turn the dream into reality". □

Gujarat University Hosts Annual Meet of Indian Geographers

Gujarat University hosted the Fifth Annual Meet of the Institute of Indian Geographers (IIG) from 9th to 11th February at Ahmedabad. Nearly 300 Geographers and Experts from various parts of India and abroad participated in the conference. As many as 85 papers, covering varied aspects of the discipline, were presented at the technical sessions. Over and above the sixteen technical sessions, two seminars and one invited talk were also organised during the three days of the conference. There was full attendance of the delegates in all the technical sessions and seminars.

The conference was inaugurated by Prof. K.S. Shastri, the Vice-Chancellor of the Gujarat University. The keynote address was delivered by Dr. K.R. Dikshit, the founder president of IIG and Head of the Department of Geography, Poona University and Dr. S.P. Gupta, the present President of the IIG, gave presidential remarks about the activities of the Institute of Indian Geographers.

Dr. Otmar Seuffert, a Guest Speaker from West Germany, gave a learned talk on the 'basic principles of Geomorphodynamics in the tropics'. A panel discussion on "the evaluation of geography text-books' under the joint auspices of Gujarat State School Text-book Board and IIG, which was also held, generated a lively and heated discussion on the nature, content and level of text-books published by Gujarat Board. Dr. A.B. Mukherjee (Chandigarh) chaired the session and gave a thought provoking remarks on the nature and content to be covered in the text-books at different levels. Prof. Hasmukh Patel, the Vice-President of Gujarat Text-book Board, invited a positive criticism and suggestions over the text-books provided to all delegates for evaluation.

Shri Digvijay Singh, the Honourable Minister of Environment, Govt. of India initiated the talk on environment and the role of geographers at the concluding session of the conference. The seminar on 'environment' after the Lothal field trip, was also held on the 4th day of the conference by the Research Unit of the Gujarat School Textbook Board. Under the Chairmanship of Dr. Das Gupta (National Atlas, Calcutta) the last academic discussion proved most successful. Many young geographers participated in the discussion and the session was fully attended.

The sixth meet of IIG is to be held at Tirupati in Southern India.

Bombay University Organises Workshop on Quantitative Techniques in Economic Analysis

The Department of Economics, University of Bombay, under its University Leadership Project in Economics organised a 3-day Workshop on "Quantitative Techniques in Economic Analysis (Elementary Level)" at the Centre of Post-Graduate Instruction and Research in Panaji, Goa, from 4th to 6th April, 1984. 25 teachers in Economics from colleges in Goa and Sindhudurg and Ratnagiri districts (of Maharashtra) participated in the Workshop.

The aim of the Workshop was to provide an opportunity to teachers in Economics from these areas, to come together and familiarise themselves with some of the basics in Quantitative Techniques as applied in Economic Analysis, keeping in view the empirical relevance.

At the Inaugural Session on 4th April, 1984, after extending a hearty welcome to the participating teachers, Dr. Kamat Helekar, Director of the Post-Graduate Instruction and Research Centre in Goa, briefly mentioned the importance of the Workshop for teachers in Economics.

The deliberations of the Workshop commenced with a Special Lecture on the 'Scope and Method of Quantitative Approaches in Economic Analysis' by Dr. R. Bharadwaj, Professor-in-charge of the ULP. Later he also gave an idea of the Course-content of the topics to be covered at the Workshop. In addition to the lectures delivered by the ULP academic staff, Dr. R. Bharadwaj and Principal S.D. Gokhale delivered two Special Lectures on "Human Resources Mobilisation Strategy of Development" and "New Strategy for Development" respectively. Dr. S.K. Gandhe, Secretary, Planning, Government of Goa, was the chief guest at the Valedictory Function organised on the concluding day of the Workshop on 6th April, 1984. He complimented the Bombay University's Department of Economics for organising such Workshops exclusively for teachers in Economics in Goa and surrounding areas in Maharashtra. He stated that acquaintance with modern Mathematical and Statistical Techniques has become very essential for applied economic policy-making, both at the Micro nnd Macro levels.

Giving their reactions of the Workshop, the teacher-participants, felt that the duration of the Workshop should have been longer. Dr. R. Bharadwaj, Professor-in-charge ULP, assured the teachers that the ULP would make all efforts to attend to the felt-needs of teachers in Economics in Goa and Konkan areas and initiate suitable programmes accordingly. In his Vote of Thanks Principal S.D. Gokhale of the Birla College of Arts & Science, Kalyan, made a special reference to the role played by the University Grants Commission in encouraging such innovative programmes through the ULPs in the Universities. Dr. M.S. Gore, Vice-Chancellor, University of Bombay, had sent a special message on the occasion.

The University Department of Economics will shortly be organising two more Workshops in Bombay—one on Advanced Level Quantitative Techniques and another on a topic in General Economics.

Methods and interpretations in History

The Department of History, University of Poona, held a Seminar on 'Methods and Interpretations in History' on 17th & 18th February, 1984, for its M.Phil. students and for its post-graduate and under-graduate staff.

The Seminar was inaugurated by Dr. D.B. Kerur, Dean of Social Sciences, who laid stress in his speech upon the importance of scientific approach in Social Sciences, and also drew attention to the inherent dangers of such an approach, particularly the danger of failing to relate the 'slices' of the reality taken up for study to the totality of reality.

Prof. Y.D. Phadke of the University Department of Politics, shared with the audience the problems of historical verification of evidence. He illustrated his case with his experience of re-writing the life of V.D. Savarkar, particularly regarding the episode of his escape from ship at Marseilles. Dr. Phadke pointed out the imaginative excesses of Savarkar's biographers, who were beyond correction by Savarkar himself during his lifetime. Dr. Phadke warned historians against easy and uncritical acceptance of evidence, and spoke inspiringly about the excitement of investigative research.

Dr. M.K. Dhavalikar, Joint-Director of the Department of Archaeology, Deccan College, introduced the historians to the possibilities of enriching history, both ancient and more modern, with insights from new archaeological findings. He stressed the importance of understanding 'culture process' and material life. Dr. Dhavalikar illustrated his talk with a wealth of information drawn from his field-work in Inamgaon.

Dr. A.R. Kulkarni's talk concluded the proceedings of the first day. He described the methodology of research that he had to adopt when he worked on Grant Duff, and came to the conclusion that every research scholar has to find out his own way.

Dr. T.R. De Souza initiated the proceedings of the 2nd day with his talk on 'Oral History' and drew an extensive picture of the use made of oral history from the time history got its name, and pointed out the elements of novelty in Oral History as it is sought to be applied now-a-days

Dr. A.R. Kulkarni concluded the Seminar proceedings by summing up the insights of information of the various guest-speakers. He also had something more to add by way of stressing the importance and implications of social history and economic history, as a part of regional history. He discussed the various sources and their limitations for reconstruction of the regional part.

Scheme for improvement of performance at South Gujarat Varsity

South Gujarat University has decided to introduce an "improvement of performance" scheme to give students a chance to get better results in their final year and thus improve their career prospects.

Under the scheme, which was approved by the Syndicate of the University recently, will be applicable to students who get more than 45% marks.

The student would have to intimate the University of his intention to reappear in one or more subjects within one month of the announcement of results. The result of the earlier examination in respect of such students will he treated as cancelled and the result of the re-examination will be recognised.

Extension lectures at AU

Prof. M.V. Rama Sarma, Vice-Chancellor, Sri Venkateswara University delivered the Extension Lectures at Annamalai University for the year 1983-84. Prof. S.V. Chitti Babu, Vice-Chancellor, Annamalai University, in his inaugural address dwelt on the need for turning to the noble and great among the men of the past pointing out that, that was the only way to elevate oneself. He emphasized the usefulness of a comparative study of men of letters, their mind and art, which represented cultures and temperaments of a varying and therefore interesting nature.

Prof. M.V. Rama Sarma presented the case of the Miltonists keeping before him the British Academy Lectures of Eliot and other such attempts of critics to debunk Milton. Supported by unfailing scholarship and exemplary eloquence, Prof. Rama Sarma discussing the over-all achievement of Milton in his first two lectures traced the poet's pattern of philosophic interrogation and reconciliation in his works. The third lecture was devoted to an interesting interpretation of *Hamlet* through an Elizabethan-Christian view, that there was no delay in Hamlet's revenge on the slayer of his father.

School syllabus needs a change

Shri K.K. Sharma, District Education Officer, Kapurthala, presiding over a one-day orientation course for education officers and heads of the schools of Ludhiana, Patiala, Jullundur and Kapurthala, recently said that the Youth Club Programme of the Punjab Agricultural University had proved a boon for the school children since it helped in the development of their personality. He further said that by participating in this programme the children could make the best use of their leisure time for useful purposes. He felt that there was a need for change in the syllabus at school level. The suggestion for this change should come from the educational experts of the PAU, he added.

The course which was organized by the Department of Extension Education of the Punjab Agricultural University with the active collaboration of the State Education Department, was attended by more than 150 delegates.

Dr. S.S. Pawar, Senior Extension Specialist (Youth Programme) while reviewing the 12-year progress of Youth Club Programme in Ludhiana, Patiala and Jullundur Districts said that this programme had been extended to Kapurthala District also. He further said that the Youth Clubs had started a novel and useful programme named 'care of aged people'. Dr. Pawar said that the youth clubs were utilizing their leisure time for useful activities like kitchen gardening, poultry farming and bee-keeping.

Dr. K.S. Nandpuri, Director of Extension Education who inaugurated the course said that the main objective behind this programme was to bring about a social change in the rural areas through school going children in order to transmit the new farm technology evolved by the PAU for cultivation and care of different cereal, vegetable, and fruit crops, new farm machinery and care of farm animals. Dr. Nandpuri advised the youth clubs to observe the dignity of labour which was a must for overall progress. He advised the youth to refrain from toxicants as those were harmful for human health and retarded the pace of progress.

APOGEE-84 at BITS—a grand success

The second All-India University Youth Academic Week (A Professions Oriented Gathering Over Educational Experiences) was held at Birla Institute of Technology and Science, Pilani from 13 to 15th April, 1984. During this period 96 papers were presented in 31 sessions on topics related to 17 inter-disciplinary areas. Thirty three students from 14 institutions located in different parts of the country participated in this unique academic extravaganza.

The APOGEE provided an opportunity to the students of different disciplines to present their professional work-achievements carried out in the course of their academic pursuits.

On this occasion 20 invited lectures by eminent academicians and professionals were also organised. Other highlights of the event were: organisation of a books exhibition in which, besides National Book Trust, a number of other publishers of repute participated; exhibitions put up by local student associations and one on US space exploration by United States Information Service, and screening of science and technology films.

APOGEE-84 was inaugurated by Dr. Harsh Vardhan, ex-Director, Central Scientific Instruments Organisation, Chandigarh and the valedictory address was delivered by Prof. A. Rahman, Director, National Institute of Science, Technology and Development Studies, New Delhi. The following students of BITS won I, II, III prizes respectively in paper presentation: Sri Harish Bhat, Sri Ch. V.S.N. Raju, Sri Sumant M.H.

Lecture series on science & technology

The Indian Institute of Technology, Delhi is starting a lecture series on Science & Technology. The first lecture of the series was delivered by Prof. Yashpal, Chief Consultant, Planning Commission, on "Using Satellites for New Modes of Communication" on April 24, 1984 in the Seminar Hall of the Institute.

The lecture series aims at acquainting the public with details of important scientific and technical work being done in India as also at creating interest in the general public in the scientific and technical activity. A large number of scientists and engineers from various institutions are expected to attend this lecture.

Review of examination reforms at Jammu Varsity

The Vice-Chancellor of Jammu University has appointed a committee of academics to review the system of Re-evaluation of answer-books and suggest measures for its improvement in the light of experience gained during the past seven years of operation of the system.

It may be recalled that earlier the Vice-Chancellor appointed another committee to review the system of Internal Assessment prevalent in the University.

Faculty status for MBA Department of LU

According to reports, the Lucknow University authorities have decided in principle to grant full faculty status for the Department of Business Administration of the University. A proposal for the construction of a separate building for the library, auditorium, etc. has also been approved. The university will provide land for the building while finances for the building would be collected from various sources including industrialists.

Astronomy and space science courses at Shivalik College

According to reports, the Shivalik College at Nangal will introduce astronomy and space science as elective subjects for the undergraduate classes from the academic session 1984-85.

The college will also offer a diploma course in industrial safety and postgraduate classes in economics from the next academic session.

Cancer course for nurses

The Leelabai Thackersey College of Nursing of the SNDT Women's University, in collaboration with the Tata Memorial Hospital and Hiralal Narang School of Enterostomal Therapy, has planned a 9-month specialised diploma course for nurses and others in the treatment of cancer patients. The course is expected to begin in June this year.

National seminar on correspondence education at HP Varsity

Directorate of Correspondence Courses, Himachal Pradesh University organised the 4th National Seminar on Correspondence Education in collaboration with the University Grants Commission, and the National Council for Correspondence Education. The Seminar was inaugurated by Dr. L. P. Sinha, Vice-Chancellor, Himachal Pradesh University. It was a two-day seminar attended by about 30 participants from different universities. There were three academic sessions, one each on lesson writing and evaluation of assignments; personal contact programme and need for a central body for correspondence Education.

One participant from Research Cell, Association of Indian Universities and two participants from Ministry of Education also participated.

CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/ Seminar/Symposium/ Workshop	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks
June 15-July 5, 1984	ICAR sponsored Summer Institute on Recent trends in Bovine Surgery	College of Vety. Science, G.B. Pant Univ. of Agri. & Tech., Pantnagar	Dr. Amresh Kumar Prof. & Head.	—
June 18-July 14, 1984	UGC sponsored Summer Institute on General Relativity and Cosmology	Department of Physics, Ravishankar University, Raipur	Prof. R.K. Thakur Department of Physics	—
June 25-July 14, 1984	ICAR sponsored Summer Institute on Biology and Management of Downy Mildews	Department of Plant Pathology, G.B. Pant Univ. of Agri. & Tech., Pantnagar	Dr. R.S. Singh, Prof. & Head	—
June 27-July 21, 1984	ICAR sponsored Summer Institute on Bio-Fertilisers	Deptt. of Agri. Microbiology, Tamilnadu Agril. Univ. Coimbatore	Dr. G. Oblisamy, Prof & Head	—

News from Agril. Varsities

Insect damaging fodder crops

A serious attack of gram caterpillar on berseem and lucerne seed crops has been noticed in all the seed producing areas of Punjab. The larval feeding causes heavy damage to buds, flowers and immature seeds resulting in drastic decline of seed yield.

To control this pest, the experts of the Punjab Agricultural University have advised farmers to spray their infested crop with 400 ml. thiodan 35 EC in 80 litres of water per acre and repeat the spraying after 10 to 15 days, if necessary. The spraying should be done in the evening to save the insect-pollinators from the direct hit of the insecticide. The sprayed crop should not be fed as fodder to the animals for atleast 10 days.

TNAU eco research

Several aspects of the eco development of the western ghats in Tamilnadu will be taken up for research by the Tamilnadu Agricultural University. The Department of Environment of the Government of India has agreed to provide Rs.55 lakhs for six schemes which would aid eco development and preserve the eco system.

The main objectives are to study the microbial systems connected with the plants grown in the western ghats, the socio-cultural psychological characteristics of tribal people, the effect of environment pollution on soils, plants and water basins, the ecological factors affecting the seed production of vegetable crops, development of forage grasses, legumes, trees, etc. and conduct research on medicinal plants and pines.

The disciplines of soil science and agricultural chemistry, microbiology, agricultural economics, agricultural extension and rural sociology, seed technology, forage crops and horticulture will be involved in the research.

Serious disease attacking mango trees

The Plant Pathologists of the Punjab Agricultural University during their recent survey of mango orchards of Punjab have observed that powdery mildew disease on mangos has appeared in serious form this year in Gurdaspur, Hoshiarpur and Ropar districts.

The disease appears on the inflorescence and inhibits the setting of fruit on such inflorescences. Even if the fruit setting has taken place, it may lead to fruit drop due to infection on the attachment point of the fruit with the inflorescence.

To control this disease, the University experts have advised the orchardists to spray their mango trees at this stage with 500 ml Karathane or 1.25 kg of wettable sulphur in 500 litres of water. More sprayings can also be done depending on the intensity of the disease.

Field day organised at BCK Viswavidyalaya

A Farmers' Field Day on Spring-Summer Tomato was organised by the Field Extension Wing, Bidhan Chandra Krishi Viswavidyalaya at Kumarpur village in Nadia District, West Bengal on 4th April, 1984 under the Lab to Land Programme.

It has been possible to grow Pusa Ruby tomato in the plains of West Bengal thrice in a year—first as an autumn-early winter crop, second as a main winter crop and third as a spring-summer crop.

It has also been possible to introduce the cultivation of some new vegetables like amorphophallus '01' (Kavur), cauliflower (Rusa Deepali), and cabbage (Express) to bring more profit as well as more employment to the small and marginal farmers under the programme.

Sri J.C. Sengupta, Vice-Chancellor, Bidhan Chandra Krishi Viswavidyalaya, Dr. D. J. Ray, Zonal Coordinator, Zone II, Lab to Land Programme, a number of scientists and about fifty vegetable farmers from different villages attended the Field Day.

News from UGC

UGC assistance for international astronomical union symposium

The University Grants Commission has agreed to a proposal of ISRO Satellite Centre, Bangalore, Department of Space, Government of India for providing a contribution of Rs. 2 lakhs for meeting expenditure on TA/DA and registration charges by the participants from universities and colleges in the International Astronomical Union Symposium to be held in New Delhi in November, 1985.

About 2,000 delegates are expected to attend this Symposium, of which 1200 will be from outside India. Prior to this symposium, two Satellite Symposia—one on Hydrogen Deficient Stars and the second on Quasars—will also be held at Mysore and Bangalore respectively.

UGC approves assistance for teaching and research in museology

The University Grants Commission has agreed to provide assistance for teaching and research in Museology in Indian Universities on a selective basis. This has been done on the recommendation of the Art History Panel which had constituted a small Sub-Committee to examine this question. The Sub-Committee had expressed the view that the University Grants Commission should encourage and provide funds for the establishment of museums in the universities on a selective basis in the field of Humanities, Art, Natural Sciences and Technology etc. The pattern of assistance would be the same as under the Sixth Plan development schemes.

Additional UGC grant to Andhra University

The University Grants Commission, on the recommendation of the Sixth Plan Visiting Committee, has approved the release of an additional grant of Rs. 53.20 lakhs to Andhra University, Waltair for the following items:

Books and Journals Rs. 11 lakhs; equipment Rs. 14 lakhs; building Rs. 9 lakhs; staff Rs. 17.20 lakhs and equipment for health centre Rs. 2 lakhs.

This grant, which is out of total allocation of Rs. 100.00 lakhs for the Plan period, is in addition to Rs. 46.80 lakhs already approved for various items.

Additional UGC grant to Shri Krishnadevarya University

The University Grants Commission, on the recommendation of the Sixth Plan Visiting Committee, has approved the release of an additional grant of Rs. 90.96 lakhs to Sri Krishnadevarya University, Anantpur (A.P.) for the following items:

Books and Journals Rs 11.25 lakhs; equipment Rs. 19.75 lakhs; building Rs. 46.50 lakhs; staff (teaching and technical) Rs. 10.76 lakhs and Miscellaneous Rs. 1.70 lakhs.

This grant, which is out of the total allocation of Rs. 100.96 lakhs for the Plan period, is in addition to Rs. 10 lakhs already approved for books, journals and equipment.

Winter Asia in the offing

Winter Asian Games, on th lines of the Winter Olympic Games, are in the offing. A proposal to this effect is before th Olympic Council of Asia (OCA) and the National Olympic Committee of Japan has offered to hold the first edition of the games in Japan.

Meanwhile, a Winter Sports Federation of India has also been established with Mr. K.P. Singh Deo, Minister of State for Defence, as its President. Commander T. Mishra, Secretary, Services Sports Control Board, has been made the secretary of the Federation.

News from Abroad

1.2 million students in China's Television University

China's Television University has enrolled more than 1.2 million students since it was set up five years ago, the New China News Agency (NCNA) reported recently.

It said the university was now the largest of its kind in the world and had 478,000 students majoring in 13 specialities in science, engineering and the arts.

The agency said the university now had a full-time faculty of more than 11,000 plus some 18,000 teachers coaching students face-to-face. The students are enrolled for a three-year curriculum and can attend some 20,000 classes across the country.

Sports News

●The NS National Institute of Sports, Patiala would have four more disciplines for training coaches in winter games, Shooting, Squash and Equestrian skills.

●A master plan for yoga development is to be prepared soon.

@The question of setting up Centre for Yoga Development is under consideration.

●A Centre for Yachting will soon be set up in Calcutta with sub-centres at Raipur and Amravati.

New physical education college in Kerala

On a 50-acre plot of land to be given by the Kerala Government at Karya vattom, near Trivandrum, a regional college of physical education is to be set up under the auspices of the Society for National Institute of Physical Education and Sports (SNIPES). Announcing the decision taken at a recent two-day meeting of the Board of Governors of SNIPES, its Chairman, Shri V.C. Shukla, said that the Kerala Government would also give Rs. 50 lakhs over the next five years for this project. SNIPES would meet the non-recurring expenditure of Rs. 231.5 lakhs and a recurring expenditure of Rs. 68.5 lakhs.

Vice-Chancellors Conference

A Conference of Vice-Chancellors of Universities and deemed to be universities in India is to be held at Vigyan Bhavan, New Delhi on the 21st and 22nd May, 1984. The Conference is being organised jointly by the Ministry of Education & Culture of the Govt. of India and the University Grants Commission.

The main items that are likely to come up for discussion at the conference are :

(i) Maintenance of Standards and Innovative Development; (ii) The Research Role of the Universities; (iii) Universities and National Development; and (iv) Management of the Universities.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

HUMANITIES

Philosophy

1. Awasthi, Jaya Rani. *Shankara Vedanta mein Adhaysveda ka sameekshatmak adhyayan.* BHU, Varanasi.
2. Justa, H.R. *Aesthetics of Sri Aurobindo.* HPU, Simla.
3. Pandey, Dina Nath. *Sankhya ka dwait vad: Ek sameekshatmak adhyayan.* BHU, Varanasi.

Fine Arts

Drawing & Painting

1. Kul Bhushan. *Rajasthani chitrakala mein vyaktichitra: Ek tulnatmak adhyayan.* Meerut U.
2. Mohammad Rafiqul Alam. *Art of painting in Bangladesh, 10th to 19th centuries.* BHU, Varanasi.
3. Ram Swarup. *Pahari chitrakala kee shailion kee vishya vastu evam pravidhi ka tulnatmak adhyayan.* Meerut U.

Music

1. Chandorkar, Vijaya. *Bhartiya sangeet mein nibaddha va anibaddha kee avadharana tatha unka kalkramanusar vikas.* U Delhi.
2. Maitra, Binata. *Riti bibartaner maulik ritirpariprekshite Bhartiya ucchanga sangiter riti bibartaner baishistya bishlesan.* RBU, Calcutta.
3. Nayar, Sobhana. *Bhatkhande's contribution to music: A critical appreciation.* U Delhi.
4. Shukla, Jogamaya. *Tabale ka udgam, vikas aur vadan shailiyan.* U Delhi.

Language & Literature

English

1. Aditya, Anju. *Victorian history plays with special reference to Tennyson, Browning and Swinburns.* Meerut U.
2. Chaudhry, Rita. *Dramatic elements in John Donne's songs and sonnets.* GNDU, Amritsar.
3. Gupta, Satish. *Trou Dutt and Sarojini Naidu : A Comparative estimate of their poetic genius and their place in Indo-english poetry.* Meerut U.
4. Ravindran, V. *A magnificient enigma: A study of the growth of T.S. Eliot's religious personality.* U Delhi.

German

1. Bhave, Indu. *A contrastive study of deep structure of noun phrases of german and hindi.* BHU, Varanasi.

Sanskrit

1. Bhattacharjee, Panchu Gopal. *Ramayana yudha vidya.* RBU, Calcutta.
2. Hirelekar, Nandini Shriniwas. *Yagyavatkya samritiche pramukh tikakar : Vishwarup vigyaneshwarapraditya tulnatmak adhyayan.* Nagpur U.
3. Jain, Sudha. *Sanskrit natakon mein chhayatattva.* HS Gour, Sagar.
4. Kumudini. *A comparative study of Samkarabhasya and Bhaskarabhasya on the Brahmasutras.* U Delhi.
5. Kusum Kumari. *Smriti literature in the context of modern hindu law.* U Delhi.
6. Lajja Vati. *Shrikrishnacharitamartam Mahakavya ka alochanatmak adhyayan.* U Delhi.
7. Mitra, Sumedha. *Rigveda ke pancham mandal ka bhasha vaigyanik adhyayan.* BHU, Varanasi.
8. Nagar, Nisha. *Kavi Krishna Bhatta krit Ishwar Vilas Mahakavya ka sameekshatmak adhyayan.* BHU, Varanasi.
9. Sarwate, Asha *Dr. V. Raghvan ke natya evam kavyon ka anusheelan.* HS Gour, Sagar.
10. Sharma, Kamala. *Mahabhasaya ke slokavarttikon ka adhyayan.* U Delhi.
11. Tripathy, Shantilata. *A critical and comparative study of Krsna problem with special reference to Harivamsa.* Utkal U, Bhubaneswar.
12. Verma, Vishwanath Ram. *Atharva Veda: Pratishakshya tatha Paniniya vyakarana ka tulnatmak adhyayan.* BHU, Varanasi.

Punjabi

1. Panfair, Man Singh. *Punjabi sohni kav: Ik vivechan.* GNDU, Amritsar.

Hindi

1. Afridi, Nafis Ahmad *Muslim lekhkon kee hindi katha-sahitya mein samajik drishti.* Meerut U.

2. Ansuiya Devi. *Hindi gadya sahitya ke vikas mein Jabalpur ke sahityakaron ka yogdan*, 1900-1910. RDV, Jabalpur.

3. Arya, Dharam Pal Singh. *Tulsi ke brij bhasha kavya mein vakrokti.* U Delhi.

4. Bharti, Shashi Prabha. *Jaishankar Prasad, Jagdish Chander Mathur aur Mohan Rakesh ke natkon ka rangmanch kee drishti se adhyayan.* U Delhi.

5. Bijanya, Hanmant Rai. *Astitvavad aur nai hindi kavita.* HPU, Simla.

6. Khimesara, Gunmala. *Tulsi poorva avadhi bhasha sahitya ka sanskritik anusheelan.* Vikram U, Ujjain.

7. Pandey, Mahendra Nath. *Rageya Raghav kee upanyasik kala.* BHU, Varanasi.

8. Pandey, Veena. *Ritikaleen Dhrupadon ka sahityik anusheelan.* BHU, Varanasi.

9. Pathak, Ram Mohan. *Kashi kee hindi patrakarita ka sahityik yogdan.* BHU, Varanasi.

10. Prem Lata. *Ramacharitmanas mein Tulsi 'dwara prayukt paryay shabdawli.* U Delhi.

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14. Singh, Yashwant. *Upanyaskar Shri Amritlal Nagar.* BHU, Varanasi.

15. Tripathi, Om Prakash. *Hindi ka sant sahitya : Lokmangal ke pariprekshya mein.* BHU, Varanasi.

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17. Urmil Kumari. *Hindi kee rashtriya sanskritik kavita,* 1900-1950. U Delhi.

Urdu

1. Nasir Mahmood Kamal. *Bostan-e-khayal ka tahzibi aur lisani motalea.* U Delhi.

2. Taiyaba Khatoon, *Development of urdu prose from* 1857 *to* 1914. U Delhi.

Bengali

1. Chattopadhyay, Birenkumar. *Kabi Debendranath Sen: Jiban O kabya.* U Calcutta.

2. Das, Debendra Bijoy. *Saroj Kumar Roychowdhury O Bangla sahitya.* RBU, Calcutta.

3. Datta, Mira. *Srichaitanya Prabhabita bangla natak.* U Calcutta.

Oriya

1. Das, Prana Ranjan. *Prachina oriya krushna sahitya from 15th century A.D. to 17th century A.D.* Utkal U, Bhubaneswar.

2. Panigrahi, Kamalakanta. *Natyakara Kalicharana: Eka adhyayana.* Utkal U, Bhubaneswar.

Gujarati

1. Parekh, Rameshchandra Ramanlal. *Shridharani na kavyo ane natako.* SPU, Vallabh Vidyanagar.

Telugu

1. Jagannatha Char, M. *Tikkana Kumara Vyasa Bharatamula tulnatmak pariseelanamu.* SKU, Anantapur.

Geography

1. Kulkarni, Krishna Gangadhar. *Sangli District : A study in rural settlements.* Shivaji U, Kolhapur.

History

1. Agrawal, Rashmi. *Sultanet kal mein utradhikar kee samasya.* BHU, Varanasi.

2. Asha Lata. *Solhaween sadi: Uttar Bharat mein shiksha tatha sahitya.* BHU, Varanasi.

3. Ganorkar, Balaji. *Sanchi shilp mein ankit jeevan.* BHU Varanasi.

4. Kiran Lata. *Bhartiya rashtriya andolan mein Sri Arvind ka yogdan* 1910 *tak.* Meerut U.

5. Sawhney, Neera. *UNO and Rhodesia.* U Delhi.

6. Shri Nivasulu, P. *Some aspects of the cultural contribution to Malwa under Maratha period from* 1736 *A.D.* Vikram U, Ujjain.

7. Singh, Pradyumna. *Muslim rule in India : Assessment of some modern Indian historians.* BHU, Varanasi.

8. Sundaram, J. *Land system in Tamilnadu C.A.D.* 800-1200. U Delhi.

9. Tiwari, Sushma. *Nepal se prapta Lichhiwi abhilekhon ka adhyayan.* BHU, Varanasi.

10. Verma, Mohini. *Dress and ornaments in ancient India: The Maurya and Sunga periods.* BHU, Varanasi.

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REGIONAL ENGINEERING COLLEGE : SILCHAR

Advertisement No. 3/84

Applications are invited for the permanent post of PRINCIPAL, Regional Engineering College, Silchar in the Scale of Pay of Rs. 2250-125/2-2500-EB-125/2-2750/- with benefits of Contributory Provident Fund and allowances as admissible under the Rules. The appointment will be made on two years probation with retirement at the age of 60 years.

Qualifications : Essential : (1) A Doctorate Degree or a First Class Master's Degree in any Branch of Engineering or Technology from a recognised University or equivalent qualifications.

Note : In the case of Institutions where no class is awarded a Master's Degree with at least 60% marks in reaggate will be considered equivalent to a First Class Master's Degree.

(ii) Twelve years experience in teaching/research/industry including seven years experience in teaching/research in an Institution of University standard and three years administrative experience, relaxable for candidates possessing exceptionally high qualifications.

(iii) Specialised knowledge in one or more subjects in the branch of Engineering concerned.

Desirable

(i) Research publications.

(ii) Experience in guiding research.

(iii) Experience of Educational administration in an Engineering Institution of University standard.

(iv) Corporate membership of professional institution

Age : Not more than 50 years on 1st January, 1984. Maximum age limit in case of special and deserving cases is relaxed to 55 years.

Candidates may have to appear for an interview in Gauhati or Silchar or Calcutta for which first class Railway fare by the shortest route will be reimbursed by the College on production of Money Receipt.

Five (5) copies of applications with full bio-data with date of birth, academic qualifications and professional experience alongwith a Crossed Postal Order of Rs. 10/- (Rupees Five only for the candidates belonging to Scheduled Caste/Scheduled Tribe/Backward Communities etc.) in favour of the Principal, Regional Engineering College, Silchar should reach the undersigned on or before **20th June 1984.**

Candidates already in service should send their applications through their present employer or submit 'No Objection Certificate' from thei remployer before or at the time of interview.

N.K. Chaudhury
PRINCIPAL SECRETARY

INDIAN SCHOOL OF MINES

DHANBAD-826004.

Adv. No. 420002/84-Estt

Dated: April 8, 1984

The Indian School of Mines, deemed to be a University under the UGC Act, invites applications for recruitment to the following positions:

Department/Centre	Post	Specialisation/Background
(A) Centre of Mineral Resources	Asstt Professor 1	Mineral Economics
(B) Mineral Engineering	Professor 2 Asstt Professor 2 Lecturer 2	Mineral Engineering and related areas.
(C) Mining Engineering	Professor 1	Coal Mechanics & Excavation Engineering
	Visiting Professor 1 Asstt Professor 2	(a) Opencast Mining System; (b) Mine Environment
	Visiting Asstt Prof. 1 Lecturer 1	Mine Surveying (lien vacancy likely to become permanent)
(D) Industrial Engineering & Management	Lecturer 3	(a) Econometrics—1 (b) Industrial Engg—2
(E) Geology	Lecturer 1	
(F) Engineering & Mining Machinery	Asstt Professor 1 Lecturer 1	Beneficiation Equipment.
(G) Petroleum Engg.	Professor 1	Petroleum Engineering
(H) Physical Training	Sports Officer 1	

2. Qualifications

(A) Professor

An eminent scholar with published work of high quality actively engaged in research with ten years' experience of teaching and/or research of which five years should have been as Assistant Professor or in a position of equivalent responsibility. Experience of guiding research at Doctoral level.

OR

An outstanding Scholar/Engineer/Technologist with established reputation who has made significant contribution to knowledge/engineering practice.

(B) Assistant Professor

(a) Good academic record with a Doctorate Degree in relevant field; Provided that candidates not possessing Ph.D. may be considered if they have to their credit suitable published or design/development work in an institution or in an industry of repute.
(b) About five years' experience of teaching and/or research and development of which three years should have been as Lecturer or in a position of equivalent responsibility.
(c) Evidence of having been actively engaged in (i) research or (ii) innovation of teaching methods, or (iii) production of teaching material.

OR

In the case of posts in engineering subjects, candidates from the industry or professional fields should possess good academic record with recognised professional work of about seven years.

(C) Lecturer : (in Engineering disciplines):

(a) Master's degree in appropriate field.
(b) Consistently good academic record with a bachelor's degree in Engineering/Technology. First class at Bachelor's and/or Master's level.
(c) One year's relevant professional experience outside academic/research institutions.

Provided that having regard to the requirements of emerging fields and of developing inter-disciplinary programmes, the requirement of Engineering/Technology degree may be waived in the cases of candidates otherwise well qualified.

Provided further, that if a candidate who does not possess one year professional experience aforesaid or the Master's degree, is appointed as a Lecturer, he shall be required to obtain the desired professional experience/Master's degree within a period of five years of his appointment, failing which he shall not earn future increments until he has fulfilled the said requirement(s).

(D) **Lecturer** (Science/Applied Science Subjects).

(a) A doctor's degree or research work of equally high standard.

(b) Consistently good academic record with 1st or high 2nd class (B on the seven-point scale) Master's or equivalent degree in relevant subject.

Having regard to the need for developing inter-disciplinary programmes, the degree in (a) and (b) above may be in subjects of relevance.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a consistently good academic record (suitable weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research laboratory/organisation, on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within five years of his appointment, failing which he shall not earn future increments until he fulfils the said requirements.

(E) **Sports Officer**

Job Description : To organise athletics/sports and promote physical culture amongst students and staff. To organise sports activities/tournaments of University/Intervarsity level.

Qualifications

(a) High 2nd class Master's degree in Physical Education, with either (i) diploma in Sports Coaching from a recognised institution (ii) a record of having represented his University at the inter-university level or a state in the national championship.

(b) Experience in organising games and sports (as exemplified in handling of about half a dozen teams in a year in his institution and their participation in University/Inter-collegiate tournaments) and ability to encourage mass participation in games and sports.

CANDIDATES WHO HAVE ALREADY APPLIED FOR THE POST OF PHYSICAL TRAINING SUPERINTENDENT IN RESPONSE TO ADVERTISEMENT NO. 420001/84-ESTT DATED JANUARY 19, 1984 NEED NOT APPLY AGAIN.

3. **Pay & Allowances and Age Limit**

Post	Upper age limit	Scale of Pay (Rs.)	Salary Rs. at	
			Min. of Scale	Max. of Scale
Professor/Visiting Professor	50 years	1500-2500	2570.00	4225.00
Asstt Prof./Visiting Asstt. Prof.	40 years	1200-1900	2270.00	3715.00
Lecturer/Sports Officer	35 years	700-1600	1539.50	2730.00

A higher start in the scale may be given in special and deserving cases. Upper age limit relaxable in respect of candidates otherwise considered suitable.

4. Detailed information and prescribed application form may be had free of charge from Registrar, Indian School of Mines, Dhanbad-826004 by sending a self-addressed envelope (of size 30 cm x 12 cm) duly affixed with stamps worth Rs. 4.05.

5. Application in the prescribed form complete in all respects should reach the undersigned on or before **26th May 1984**.

REGISTRAR

PUNJABI UNIVERSITY PATIALA

(Advertisement No. 7 PRO/ESTT./ PU/April, 1984).

Applications are invited for the following posts:

1. **One Professor** : (Grade: Rs. 1500-60-1800-100-2000-125/2-2500) **& Three Readers in English, Punjabi, Economics & Commerce** (Grade: Rs. 1200-50-1300-60-1900) **(For Regional Centre at Bhatinda).**

Qualifications for the Post of Professor

An eminent scholar with published work of high quality actively engaged in research. About ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Qualifications for the Posts of Readers

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that at least three of these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record & teaching/Research.

Note: A person with outstanding qualification in either of these subjects could be considered for appointment as Professor and a Reader each will be appointed in the other subjects.

2. **Lecturers** : One each in English, Punjabi, Economics & Commerce **(For Regional Centre at Bhatinda).** (Grade : Rs. 700-40-1100-50-1600).

Qualifications

(a) A Doctorate's degree or research work of an equally high standard; and

(b) Good academic record with atleast second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign university.

Having regard to the need for developing inter-disciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

3. **Lecturer in Journalism & Mass Communication (One).**

(Grade : Rs. 700-40-1100-50-1600).

Qualifications

Essential

(i) Good academic record with at least second class Master's degree in the subject (Communication/ Mass Communication/ Journalism etc.) from an Indian University or an equivalent degree from a foreign university.

OR

At least second class (C in the seven point scale) Master's degree in Social Sciences/Sciences/Humanities with at least a second class Bachelor's degree or Diploma in Journalism from a recognised Indian University/Postgraduate diploma from a recognised National Institute.

Desirable

(i) Teaching experience at College or University level.

(ii) Work experience in any area of Mass Communication (Newspaper/Magazine, News Agency, Public Relations, Advertising, Radio or T.V. Journalism etc.).

Note

For the posts of Readers & Lecturers, Good academic record will be determined as under:

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree or

(ii) A candidate without Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

4. **Assistant Registrar**

(Grade : Rs. 940-30-1000-40-1200/50-1400/60-1700-75-1850 + Rs. 100/- Spl. pay).

Qualifications

Master's or LL.B. degree of a recognised University with at least 7 years experience of working in a responsible position in an educational institution/office.

5. **Programme Officer in Department of Business Management : One**

(Grade : Rs. 850-30-1000-40-1200/50-1400/60-1700).

Qualifications

MBA/M.Com/M.A. in Economics/ a law graduate preferably with a diploma in Business Management. The candidate should have at least five years administrative experience as a manager or supervisor. Experience in handling correspondence courses will be an additional qualification.

General

Candidates for teaching and research posts should possess working knowledge of Punjabi upto Punjabi Parveshka standard. Persons from outside Punjab could however be considered for appointment but they will be required to give an undertaking in writing that they will acquire the requisite qualifications in Punjabi within a period of two years.

Higher start within the grade admissible depending upon the ability and experience of the candidate. House rent and Dearness Allowance, Provident Fund and Medical facilities according to University rules.

Applications complete in all respects on the prescribed form accompanied by a crossed Postal Order worth Rs. 5/- (Rs. 2/- for candidates belonging to Scheduled Castes/Tribes & Backward Classes) drawn in favour of the Registrar, Punjabi University, Patiala, should reach the University by **16-5-84.** The forms can be had from the Production & Sales Officer, Publication Bureau Punjabi University, Patiala on payment of Re. 1/- by sending a crossed Indian Postal Order drawn in favour of the Registrar, Punjabi University, Patiala alongwith a self addressed envelope of the size of 25×10 cms. stamped with Rs. 1.70 postage for teaching posts and Re. 0.50 for non-teaching posts which should be superscribed at the top in bold letters **REQUEST FOR APPLICATION FORM FOR THE POST OF———**

Persons already in service should apply through proper channel. Those who are not in a position to submit their applications through proper channel before the due date should submit an advance copy before the due date and regular applications through proper channel by **18-5-84.**

D.S. Kang
REGISTRAR

Indian school of Mines

DHANBAD-826004

Advt. No. 420003/84-Estt. **April 9, 1984**

Indian School of Mines, deemed to be a University under the UGC Act, is setting up a Computer Centre with a VAX 11/780 type main frame. It invites applications for the following posts for this Centre:

1. **System Manager — One**
   Qualifications : Ph.D. in Computer Science/Technology ; Experience in hardware/software and computation with large computer system.
2. **System Engineer — One**
   Qualifications : Master's degree in Computer Science, with specialisation in software engineering, with sufficient experience in relevant line.

3-4. **Programmers — Two**
Qualifications: Master's/Bachelor's degree in software engineering and/or Master's degree in the application area with competency in programming.

5-6. **Computer Operator-Junior Grade — Two**
Qualifications : Bachelor's degree in Science with adequate training in Computer Operation.

7. **Job Receptionist — One**
   Qualifications: Bachelor's degree in Arts with about three years experience in handling computer jobs.

8-9. **Key Punch Operator — Two**
Qualifications : High School Certificate and special training in Key Punch Operations.

10. **Trainee Programmer** (One-year assignment) — One
    Qualifications : Master's degree in Physics/Mathematics or in Computer Science.
11. **Trainee Operator** (One-year assignment) — One
    Qualifications: Bachelor's degree in Science with some training in Computer Operation.

PAY & ALLOWANCES AND AGE LIMIT

	Upper age limit	Scale of Pay	Salary at	
			Min. of Scale	Max. of Scale
	Years	Rs.	Rs.	Rs.
System Manager	45	1500-2000	2570.00	3380.00
System Engineer	35	1100-1600	2170.00	2720.00
Programmer	35	700-1300	1539.50	2370.00
Computer Operator, Jr. Grade	25	425-700	1027.70	1539.50
Job Receptionist	25	330-560	860.40	1237.60
Key Punch Operator	25	260-400	698.30	992.00
Trainee Programmer	25	600/- stipend p.m.	—	—
Trainee Operator	25	400/- stipend p.m.	—	—

Age limit relaxable by five years for SC/ST candidates, and also in cases of persons otherwise considered specially suitable.

General : Other things being equal, preference will be given to SC/ST candidates. Further details and prescribed application forms are obtainable from the Registrar, Indian School of Mines, Dhanbad-826004, on sending a self addressed envelope of size 30 cm x 12 cm affixed with postage stamp of the value of Rs. 4.05 only. Completed application forms should reach the Registrar on or before **26th May, 1984**.

CANVASSING IN ANY FORM WILL BE TREATED AS A DISQUALIFICATION.

REGISTRAR

IPB—67

UNIVERSITY OF NORTH BENGAL

F. 22/Advt./Estt./8/R-84 Dated: 18-4-84.

Applications in prescribed forms are invited for the following posts:

(A) **Professor** : One each in Chemistry, English, Mathematics (Specialisation: General Topology/Functional Analysis/Algebra), Political Science (Specialisation: Politics of Development), and Economics (Specialisation : Regional Development).

(B) **Reader** : One each in Chemistry, History, Physics (Specialisation: High Energy Physics/Electronics), Commerce (Specialisation: Industrial Economics/Labour Relations), Political Science (Specialisation: Political Thought/Theory), Sociology & Social Anthropology (Specialisation: Industrial/Urban Sociology), Economics (Specialisation: Demography & Population Planning), and Philosophy (Specialisation: Philosophy of Arts/Moral Philosophy/Comparative religion).

(C) **Lecturer** : One each in Chemistry, Commerce, Sociology & Social Anthropology, Political Science (Specialisation: International relations/Research methods) and Bengali (Specialisation: Hindi/Sanskrit). Lecturers in Geography & Applied Geography (Two).

(D) **Lecturer in Law** (two Posts) at the University College of Law.

Scales of Pay : (A) Professor : Rs. 1500-60-1800-100-2000-125/2-2500/-. (B) Reader: Rs. 1200-50-1300-60-1900/- and (C) Lecturer : Rs. 700-40-1100-50-1600/- respectively with other allowances and benefits as per University Rules. (D) Lecturer in Law: Rs. 700-40-1100-50-1600/- with other allowances and benefits as per Rules.

Qualifications : For Professors, Readers and Lecturers as prescribed by the University Grants Commission. Details of qualifications for Professors, Readers and Lecturers as also for the posts of Lecturers in Law may be obtained with application forms.

N.B. : For the post of Lecturer in Commerce persons with Master's degree in Business Administration may also apply.

All the posts are reserved for the candidates belonging to S.C./S.T. provided they fulfil the essential qualifications laid down. If candidates are not available or not found suitable, posts will be filled up from general categories. Hence non-S.C./S.T. candidates may also apply. Choice of selection committee may not necessarily be confined to those who apply formally. No application except in prescribed application forms may be considered.

Prescribed application forms may be obtained from the office of the Registrar personally on payment of Rs. 5/- (Rs. 3/- for S.C./S.T.) in cash at the University Cash Counter or by sending a self addressed stamped of Rs. 1.40 envelope of 25 x 13 cms. with crossed I.P.O./Bank Draft of Rs. 5/- (Rs. 3/ for S.C./S.T.) in favour of the University of North Bengal. Filled in application forms (6 copies) along with one self-addressed unstamped envelope must reach the office of the Registrar, P.O. North Bengal University, Dist. Darjeeling, Pin: 734430 on or before **7-6-84**.

REGISTRAR

BIRSA AGRICULTURAL UNIVERSITY

RANCHI-834007

Advertisement No. 2/84

Applications are invited for the post of Dean (Forestry) Birsa Agricultural University, Ranchi in the scale of Rs. 1500-60-1800-100-2000-125/2-2500+ Rs. 250/- p.m. special pay plus usual allowances so as to reach the undersigned alongwith I.P.O. for Rs. 10/- (Rs. 2.50 for ST/SC) drawn in favour of Comptroller, Birsa Agricultural University, Ranchi by **25th May, 1984**.

Qualifications

Essential

(i) Master's Degree followed by Ph. D. Degree in Forestry.

OR

Master's Degree in Science & AIFC Diploma followed by Doctorate Degree related to Forestry subject as evident by thesis work.

(ii) Atleast ten years of teaching Research or organisation and implementation experience of Forest-programme.

(iii) Experience of organising, teaching, Research and Extension Education as Professor of Forestry or equivalent in a Forest Faculty.

(iv) Distinguished record of leadership in the field of Forestry as Head of the Organisation/Department.

Desirable

(v) Good Research Experience as evident by published papers.

Applications forms and details can be obtained from Recruitment Officer, Birsa Agricultural University, Ranchi Veterinary College Campus, Ranchi-834007, by making a written request accompanied by self addressed stamped (Rs. 3.95 for Regd.) envelope of 23 x 10 cm. alongwith I.P.O. for Rs. 5/- as the cost of application form, drawn in favour of the Comptroller, Birsa Agricultural University, Ranchi-834006.

R.P. Singh
RECRUITMENT OFFICER

MAHARSHI DAYANAND UNIVERSITY

ROHTAK

Advertisement No. 2/84

Applications on prescribed forms (Through Proper Channel in the case of those who are already in employment) are invited for the following posts:

University Teaching Departments

1. **Professors** : In Physics, Bio-Sciences, Business Management, Mathematics, Music, Geology, Geography.

2. **Readers** : In Physics, Chemistry, English, Bio-Sciences, Psychology, Education, Music, Economics, Sanskrit, Pali & Prakrit, Geology, Commerce.

3. **Lecturers** : In Physics, Chemistry, Bio-Sciences, Hindi, Mathematics, Psychology, Geography, Education, Economics, Sanskrit, Pali & Prakrit, Geology, History.

University Law College

4. **Readers** : In Law.

5. **Lecturers**: In Law, English, History, and Sociology.

Qualifications

Professors

Consistently good academic record, first or high second class Master's degree in the subject, doctoral degree, experience of guiding research at doctoral level, 10 years' teaching experience of post-graduate classes, about 5 years as Reader.

OR

An eminent scholar with published work of high quality, actively engaged in research. About 10 years' experience of teaching and/or research. Experience of guiding research at doctoral level.

Readers

Consistently good academic record, first or high second class Master's degree in the subject, doctoral degree, 5 years' experience of teaching post-graduate classes and/or post-doctoral research.

Lecturers (Except Education)

(a) Consistently good academic record, first or high second class Master's degree in the subject.

(b) Doctoral degree or research work of an equally high standard.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in related subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of a very high standard, it may relax any of the qualifications prescribed in (a) above.

Provided further that if a candidate possessing a doctoral degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a doctoral degree or give evidence of research of high standard within five years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

Lecturer in Education

(a) Good academic record with first or second class (C in the seven point scale), Master's degree in a relevant subject.

(b) Doctoral degree in Education or research work of an equally high standard.

(c) Knowledge of Hindi.

OR

(a) Good academic record with an M. Phil degree in Education (which may be acquired while in service).

(b) Doctoral degree in any University discipline or research work of an equally high standard.

(c) Knowledge of Hindi.

Field of Specialisation

Professor in Physics : Lasers and their applications/solid state physics theoretical physics.

Professor in Bio-Sciences : Any stream of life sciences. Persons having long teaching and research experience in a life science/Bio-Sciences department will be preferred.

Professor in Business Management : Marketing Management / Personnel Management / Organisational Behaviour/Production/Finance.

Professor in Mathematics : Pure Mathematics/Applied Mathematics/ Mathematical Statistics.

Readers in Physics : Lasers/spectroscopy/solid state physics/Nuclear physics/theoretical physics/semiconductor devices.

Reader in Chemistry : Inorganic/ physical/organic chemistry.

Readers in Commerce : Quantitative techniques/research methodology/ Accountancy & Costing. (One post against leave vacancy upto 27-11-1984).

Readers in English : Modern British Literature/Commonwealth Literature in English/European Literature/Literary Criticism.

Readers in Bio-Sciences : Plant Sciences / Biochemistry / Microbiology. The persons should have done their Master's Programme in Zoology/ Botany and having done their Ph.D. Programmes in any of the streams (Plant Sciences/Microbiology/Bio-chemistry).

Readers in Psychology : For one post—Experimental Psychology and other is open.

Reader in Education : Educational planning and Administration, Curriculum development and Educational Technology, Person with Master's degree in Economics, Physics, Chemistry, Zoology and Botany will be preferred.

Readers in Music : One for Vocal and other for Instrumental Music.

Readers in Economics : (i) Quantitative Economics, (ii) General Economics.

Readers in Sanskrit, Pali & Prakrit: One post in Grammar and for the other—Indian Philosophy.

Lecturer in Physics : Solid State Electronics and Devices/Solid State Physics/Experimental.

Lecturers in Chemistry : For One—Inorganic Chemistry and for the other which is leave vacancy—Organic Chemistry.

Lecturers in Bio-Sciences : Any stream in life sciences (Plant Sciences = 3 posts; Animal Sciences (systematics) = 1 post; Microbiology/Biochemistry/ Cell Biology = 3 posts).

Lecturers in Hindi : For one post "The candidate should be M.A. Hindi and English and he should be either diploma holder in translation or should have had specialisation in translation at either of the post-graduation level in addition to other requirements".

For other post "The candidate should be having usual qualifications prescribed for a University Lecturer having preferably specialisation in Medieval poetry".

Lecturers in Mathematics : Pure Mathematics.

Lecturers in Psychology : 1. Comparative Psychology.

2. Guidance and Counselling/Clinical Psychology.

3. Industrial Psychology/Experimental Psychology.

Lecturer in Geography : Political Geography or Geography of Health.

Lecturer in Education : Educational Planning and Administration, Curriculum Development and Educational Technology. Persons with Master's degree in Economics, Physics, Chemistry, Zoology and Botany will be preferred.

Lecturer in Economics : Quantitative Economics.

Lecturer in Sanskrit, Pali & Prakrit: Pali and Prakrit.

Lecturer in History : A person capable of teaching Medieval/modern Indian History (Leave vacancy upto 31-1-1985).

Lecturers in Law College : (i) Lecturer in Law without specialisation.

(ii) Lecturers in English & History with Law degree will be preferred.

(iii) Lecturer in Sociology with specialisation in Criminology will be preferred.

(For posts other than mentioned above, candidates with any specialisation would be eligible to apply).

Non-Teaching Posts

6. **Research Associate in Physics** : (Rs. 1000/- p.m. consolidated) Ph.D. in physics or equivalent with specialisation in solid state physics.

Note : This post is upto 20-11-1985.

7. **Proof Reader (Grade-II)** : (Rs. 420-10-490/540-15-600-EB-20-700) Graduate of a recognised University with three years' experience of Proof Reading in English & Hindi. Relaxable at the discretion of the University.

8. **Junior Store-Keeper in Press** : (Rs. 400-10-490/540-15-600-EB-20-660) Matric with Science/B.Sc. degree. The candidates with Matric qualifications should have at least five years' experience and those with B.Sc. degree should have at least two years' experience of Store Keeping in Post-Graduate department/University.

UNIVERSITY COLLEGE

9. **Sr. Laboratory Assistants** : (Rs. 400-10-490/540-15-600-EB-20-660) Matric with Science, knowledge of typing, 5 years' experience of working in Science Laboratory in a college.

10. **Jr. Laboratory Assistants** : (Rs. 400-10-490/540-15-600) Matric with Science, knowledge of typing, three years' experience of working in Science Laboratory in a college.

11. **Gasman** : (Rs. 400-10-490/540-15-600-EB-20-660) Matric with Science, knowledge of preparation of oil gas in a science laboratory in a college.

U.G.C. pay scales for all categories of teaching posts. Other allowances & benefit of contributory provident fund for all the teaching & non-teaching posts admissible as per University Rules. Reservation for Ex-Servicemen/B.C./S.C./S.T. candidates as per rules & no application fee from them. Higher start admissible in deserving cases. Knowledge of Hindi essential for all posts. Qualifications relaxable for internal candidates for non-teaching posts only. Number of posts is liable to be increased or decreased.

Applications for posts mentioned at Sr. No. 1 to 6 above are to be submitted on the form prescribed for class 'A' Officers and for the remaining posts on the form prescribed for other than class 'A' Officials, alongwith attested testimonials & crossed postal order (s) for Rs. 10/- in favour of the Chief Accounts Officer payable at the post Office, Rohtak. The applications complete in all respect should reach the Registrar of the University by **25-5-1984**. Separate application form must be used for each post. The application form can be had from the Assistant Registrar (General) on payment of Rs. 2/- at the counter and Rs. 3/- by ordinary post.

REGISTRAR

GAUHATI UNIVERSITY
GAUHATI-781014

Advertisement No. 6 of 1984

Applications are invited for the following posts:

1. Professor of Mathematics : One post. Specialisation—Open.
2. Professor of Economics : One post. Specialisation—Open.
3. Professor of Sanskrit : One post. Specialisation—Kavya/Veda/Darshana.
4. Professor of Statistics : One post. Specialisation—Open.
5. Professor of Chemistry : One post. Specialisation—Research Experience in Biochemistry.
6. Professor of History : One post. Specialisation—Open.
7. Professor of Zoology : One post.

   Specialisation—Cell Biology/ Entomology/Fish and Fishery Biology/Animal Physiology/ Animal Ecology.
8. Professor of Anthropology : One post.

   Specialisation—Social Anthropology.
9. Professor of Psychology : One post. M.A./M.Sc. in Psychology with specialisation in any of the sub-fields.
10. Professor of Political Science : One post.

    Specialisation—Public Administration.
11. Reader in Assamese : Two posts. Specialisation—1. For Language group—M.A. in Assamese (Group B) with research degree or training of published work of Merit in Language or Linguistics. 2. For Literature group.—M.A. in Assamese (Group A) with research degree or published work of Merit in Bhakti literature in India.
12. Reader in M.B.A. : Two posts.

    Specialisation—For 1 post-MBA/ M. Tech./M. Com. with Marketing/Foreign Trade.

    For 2nd post—M.Sc. in Mathematics/Statistics/M. Tech./M.B.A. or equivalent with quantitative Analysis/Operating Research.
13. Reader in Sanskrit : One post. Specialisation—Kavya/Veda/Darshana.
14. Reader in History:—One post. Specialisation—Open.
15. Reader in Geography : One post. Specialisation—Geomorphology.
16. Reader in Journalism: One post. Specialisation—Open.
17. Reader in Commerce : One post. Specialisation—Open.
18. Reader in Diploma Course in Computer Science : One post.

    Specialisation—Ph.D. Degree in Computer Science (Soft Ware) or Master degree in Computer Sc. (Soft Ware) with Ph.D. degree in Physics/Maths/Statistics. Teaching experience in Computer Sc. will be treated as an added qualification.
19. Reader in Foreign Language: One post.

    Specialisation—Open.
20. Reader in Library Science : One post.

    Specialisation—Open.
21. Lecturer in Mathematics: One post.

    Specialisation—Open, but preference will be given to a candidate with Numerical Analysis and Computer programming, if available.
22. Lecturer in a MBA: Three posts. Specialisation—For 1st post—M.A. (Econ.)/M.Sc. (Econ)/ MBA or equivalent with specialisation in Economics/Mathematical Economics.

    For 2nd post/M.B.A./M.M.S. or equivalent with specialisation in Financial institution/Financial Management.

For 3rd post—M.Tech/MBA/MMS or equivalent with specialisation in production/Operations Management.

23. Lecturer in Assamese : Two posts. Specialisation—For 1st post-Language group—M.A. in Assamese (Group B) or in Linguistics, with specialisation in Modern General Linguistics.
    For 2nd post—Literature group-MA in Assamese (Group A) with specialisation in Modern Assamese literature or Textual Criticism or comparative literature.
24. Lecturer in Linguistics—One post. M.A. in linguistics with specialisation in Socio Linguistics/Tibeto-Burman Linguistics (Boro group)/Assamese linguistics-Research experience in any of the above fields will be a preferential qualifications.
25. Lecturer in M.I.L. : Two posts. Specialisation : For 1st post—M.A. in English/Sanskrit/Assamese Group A or B with Ph.D. in Assamese Language or literature.
    For 2nd post—M.A. in language subject with some Training in Linguistics and adequate knowledge of Boro language or M.A. in any of the Arts discipline with sufficient contribution in Boro Language and literature.
26. Lecturer in Zoology : One post. Specialisation : Entomology.
27. Lecturer in Environmental Science : One post.
    Specialisation : M.Sc. in Environmental Science with specialisation in Environmental Meteorology or M.Sc. in Physics with Electronics and research experience in any branch of physical Environment. Experience in handling Meteorological and Seismeological equipments will be a preferential qualification.
28. Lecturer in English Teaching: One post.
    Specialisation : 1. Teaching of English as a Second Language.
    2. Diploma holder in the teaching of English of CIEFL, Hyderabad or any other recognised Indian/Foreign University or institute.
29. Lecturer in Post-B.Sc. Diploma course in Computer Science : Two posts.
    Specialisation : Master Degree in Computer Science (Soft Ware) Teaching experience in Computer Science will be an added qualification.
30. Lecturer in Geology : One post. Specialisation — Hydrogeology/Petroleum Geology.
31. Lecturer in Foreign Languages : One post.
    Specialisation—Open.

Scales of Pay

1. Professor : Rs. 1500-60-1800-100-2000-125/2-2500/-.
2. Reader: Rs. 1200-50-1300-60-1900/-
3. Lecturer:Rs. 700-40-1100-50-1600/-.

All posts carry usual allowances admissible under the University rules in force from time to time.

In case where specialisation has not been mentioned against a post candidates should state their areas of specialisation at the Master's and Doctor's degree levels.

N.B. : All the above posts are 6th Plan posts—Permanent.

Essential Qualifications

Professor

An eminent scholar with published work of high quality actively engaged in research. Ten years' experience of teaching and/or research. Experience of guiding research at Doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Reader

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that at least three of these years were as Lecturer or in an equivalent position. This condition may be relaxed in the case of candidates with outstanding research work.

Lecturer

(a) A Doctor's degree or research work of an equally high standard, and (b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University. Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M. Phil. or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research Laboratory/Organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn further increments until he fulfils these requirements.

Lecturer in M.B.A.

Master's degree in Business Administration or M. Tech. in Engineering with first class with the proviso that the incumbent would acquire a doctorate degree within a period of eight years.

In the case of allied subjects like Industrial Psychology, Personnel Management, Business Statistics, Cost Accountancy, etc. where lecturers could be recruited with qualifications other than M.B.A. & M. Tech., the minimum qualification would be the same as prescribed by the Commission for the faculties of Arts, Social Sciences, including Commerce and Science.

Applications in plain paper in six copies giving full bio-data including (1) Name in full (in block letters), (2) Father's name, (3) Date of birth by Christian era, (4) Permament residence and address (in full), (b) Present address (in full), (5) Present occupation if any and name of employer, (6) Present salary drawn (if any), (7) Detailed academic career with mark-sheets and subjects studies (including Honours) in degree and post graduate courses from Matriculation/Higher Secondary/High School Leaving Certificate Examination onwards and copies/reprints of research contributions, (8) Name and address of two referees not related to candidate together with an application fee of Rs. 10.00 (Rupees ten), (Rs. 7.50 in case of Scheduled Caste/Scheduled Tribe candidates) by **CROSSED INDIAN POSTAL ORDER** drawn in favour of the Registrar, Gauhati University payable at the Gauhati-781014 post office should be sent in an inner sealed cover superscribed application for the post of (Name of post applied for) Advt. No. 6 of 1984 enclosed in an outer cover addressed to the Registrar, Gauhati University, Gauhati-781014 to reach him not later than **21-5-84.**

The number of this advertisement and name of the post applied for must be referred to in the application.

Persons in employment should apply through proper channel or with a no objection certificate from the present employer.

Candidates will be required to appear at an interview if and when called for.

Canvassing directly or indirectly will be a disqualification.

M.C. Bhuyan
REGISTRAR

SAMBALPUR UNIVERSITY
JYOTI VIHAR : BURLA

No. 8721/Estt. II Dated : 23.4.84
Addendum to Advt. No. 6855/Estt-II
Dated : 23.3.84

The following be added under the heading of qualifications for the post of Reader 2-A. For the post of Reader in Library and Information Science only.

(i) A good academic record with first or second class Master's degree in Library and Information Science from any recognised Indian University.
(ii) A Doctorate degree in the subject or equivalent published work.

(iii) Evidence of being actively engaged in (a) research or (b) innovation in teaching methods on (c) Production of teaching materials.

(iv) Minimum eight years' teaching and/or professional and/or research experience, out of which five years regular teaching must be at degree level of Library and Information Science.

The last date for receipt of application for the Post of Reader in Library and Information Science is extended upto **25.5.84.**

Note: The Professional experience mentioned in IV above means working (in a capacity not below the rank of an Asst. Librarian) in a library of an institution of higher education.

N.K. Pujahari
REGISTRAR

HARYANA AGRICULTURAL UNIVERSITY

Advertisement No. 1/84

Applications are invited for following posts. Higher start permissible for outstanding qualifications, experience and achievements. Benefits of Contributory Provident Fund and leave etc. admissible according to University Rules. Applications of the candidates already in service must reach through proper channel upto the fixed date. Applications on prescribed form (obtainable free by sending self-addressed unstamped envelope size 23 x 10 cms. to Assistant Registrar (F), HAU, Hissar) accompanied by prescribed fee of Rs. 10/- in the form of Crossed Postal Order in the name of Assistant Registrar (G), HAU, Hissar payable at HAU Post Office, Hissar, should reach Registrar by **29-5-1984 (12-6-1984** for candidates residing abroad). Applications received late will not be considered The applicants must possess prescribed qualifications and experience on the last date for receipt of applications. However, those who have submitted their thesis (M.Sc./Ph.D.) are also eligible to apply by the last date of receipt of applications. The date of submission of thesis must be supported by a certificate duly signed by the concerned authority of the Institution. They will be considered by the Selection Committee only if they produce the completion certificate of M. Sc./Ph.D. degree at the time of interview The envelope containing application must be superscribed as "APPLICATION FOR THE POST OF—————".

1. **Professor of Agricultural Business Management** : (One) : (i) Second class Bachelor's degree. (ii) Second class Master's degree in Business Management or equivalent P.G. training. (iii) Ph.D. in Business Management with special reference to Agriculture or Animal Sciences. (iv) Ten years experience of teaching/research/actual work in Business Management in relation to Agril. Development out of which atleast five years should be as Associate Professor or of equivalent rank.

2. **Professor of Family Resource Management** : (One) : Essential : (i) Second class B.Sc. (Home Science). (ii) Second class M.Sc. in Home Management/Family Resource Management (iii) Ph.D. in Home Management/Family Resource Management. (iv) Ten years' experience of teaching/research/extension out of which atleast 5 years should be as Associate Professor or of equivalent rank. **Desirable:** (i) Extension experience and experience in designing rural field work. (ii) Capacity for organisation as Head of a section or Department of teaching or research institute/Administrative experience.

3. **Director of Clinics** : (One) : (i) Second class B.V. Sc./B.V.Sc. & A.H./ B.V.A.Sc. (ii) Second class M.V. Sc. in any of the Vety. Clinical subject. (Vety. Surgery/Vety. Medicine/Vety. Gynaecology). (iii) Ph.D. in any of the Vety. Clinical subject. (Vety. Surgery/ Vety. Medicine/Vety. Gynaecology & Obsts.). (iv) Ten years experience of Research/Teaching/Extension out of which atleast five years should be as Associate Professor or of equivalent rank.

4. **Professor of Rural Development** : (One): (i) Second class Bachelor's degree. (ii) Second class Master's degree in Agricultural Economics/ Agricultural Extension/Rural Sociology/Rural Development/Home Science/ Animal Science/Veterinary Science. (iii) Ph.D. in Agricultural Economics/ Agricultural Extension/Rural Sociology/Rural Development. (iv) Ten years' experience of Rural Development out of which atleast five years should be as an Associate Professor or an equivalent rank. (v) Capacity for organising as Head of a Section or Department of teaching or research institute/administrative experience. **Desirable**: Experience in formulating integrated Rural Development Programme and execution thereof.

5. **Scientist (Bee Biology)** : (One): **Essential** : (i) Second class B.Sc./B.Sc. (Agr.). (ii) Second class M.Sc. in Zoology or in Agri. Zoology or Entomology. (iii) Ph.D. in Zoology/Entomology with specialisation in Agriculture/Apidology. (iv) Five years experience in Research/Teaching/Extension in Agriculture/Apidology. **Desirable**: Experience in the maintenance and rearing of Bee-colonies and in Artificial Insemination of queen-bee.

6. **Associate Professor (Vety. Obstetrics)** : (One) : **Essential**: (i) Second class B.V.Sc. & A.H. (ii) Second class M.V. Sc. in Gynaecology & Obstetrics. (iii) Ph.D. in Gynaecology & Obstetrics. (iv) Five years experience of teaching/ research/extension in Vety. Gynaecology & Obstetrics. **Desirable**: Advanced training in Vety. Obstetrics.

7. **Statistician-cum-System Analyst:** (One) : (i) Second class B.A./B.Sc./ B.Sc. (Agri.). (ii) Second class M.Sc. in Statistics/Mathematics/Computer Sciences. (iii) Ph.D. in Statistics/Computer Sciences. (iv) Five years experience of Programming and developing systems for Computer Centre.

8. **Agrometeorologist** : (One) : (i) Second class BSc./B.Sc. (Ag.). (ii) Second class M.Sc. in Agril. Meteorology/Meteorology/Physics with training in Agril. Meteorology. (iii) Ph.D. in Meteorology/Agril Meteorology. (iv) Five years experience in teaching/ research/extension in Agrometeorology/ Agroclimatology as evidenced by published work.

9. **Parasitologist** : (One (i) Second class B.V.Sc. & A.H., B.V.A. Sc. (ii) Second class M.V. Sc. in Parasitology. (iii) Ph.D. in Parasitology with specialisation in Entomology. (iv) Five years experience in research/teaching/ extension in Parasitology, preferably in Entomology. **Desirable** : Experience of rearing and maintaining infective and non-infective colonies of ticks.

10. **Associate Professor (Clothing & Textiles)** : (One) : (i) Second class B.Sc. (Home Sc.) (ii) Second class M.Sc. in Clothing & Textiles. (iii) Ph.D. in Clothing & Textiles or allied field (iv) Five years experience in teaching/ research/extension in Clothing & Textiles or allied field.

11. **Assistant Scientist (Agronomy):** (One): (Discipline-Agronomy).

12. **Assistant Professor (Plant Physiology)** : (One) : (Discipline—Plant Physiology).

13. **Assistant Scientist (Horticulture Deptt.)** : (One) : (Discipline—Horticulture).

14. **Assistant Economic Botanist (Rice)** : (One) : (Discipline—Plant Breeding-Rice).

15. **District Extension Specialist (Agronomy):** (Three): (Discipline—Agronomy).

16. **Assistant Scientist (Extension Education)** : (One) : (Discipline—Extension Education).

17. **Assistant Research Officer (Vety. Physiology)** : (One): (Discipline-Vety. Physiology with experience in RIA of hormones).

18. **Assistant Scientist (Vety. Physiology)** : (Two) : (Discipline—Vety. Physiology).

19. **Assistant Scientist (Vety. Gynaecology & Obsts.)** : (One) : (Discipline-Vety. Gynaecology & Obstetrics).

20. **Assistant Scientist (Vety. Microbiioogy)** : (One) : (Discipline—Vety. Microbiology).

21. **Assistant Professor (Internship)** (One): (Discipline-Vety. Surgery/Medicine/Gynaecology/Vety. Extension.

22. **District Extension Specialist: (Vety.)** : (Seven): (Discipline—Any branch of Vety. Science).

23. **Junior Reproductive Physio-Pathologist** : (One) : (Discipline-Animal Production Physiology).

24. **Junior Gynaecoogist : (Department of Animal Breeding)** : (One): (Discipline Vety. Gynaecology & Obsts).

25. **Junior Animal Health Scientist** : (One) (Discipline-Vety. Medicine or in any related discipline).

26. **Assistant Scientist (Soils)** : (One) (Discipline-Soils).

27 **Assistant Professor (Extension Education)** : (One) (Discipline-Extension Education/Agril. Extension Education).

28. **Assistant Scientist (Statistics)**: (One) : (Discipline-Statistics).

29. **Assistant Scientist (Acarology)**: (One): (Discipline-Zoology with specialisation/experience in Acarology).

30. **Assistant Geneticist** : (One) : (Discipline-Genetics/Botany/Plant Breeding with training in tissue culture).

Qualifications for Posts at Sr. Nos. 11 to 30:

(i) Atleast second class at Bachelor's level in the respective faculties i.e. for posts at Sr. No. 11 to 16, 26 & 27; B.Sc. (Ag.) preferably B.Sc. (Hons) Agri., for posts at Sr. Nos. 17 to 22, 24 & 25; B.V. Sc. & A.H. for post at Sr. No. 23; B.V. Sc. & A.H., B.Sc. Dairying, B.Sc. Animal Science, B.Sc. Agri. (with elective in Animal Science), for post at Sr. No. 28: B.A./B.Sc. with Math./B.Sc. Agri. and for posts at Sr. Nos. 29 & 30: B.Sc./B.Sc. (Agri.)

(ii) Master's degree in the first class or with an OGPA of not less than 3.2/4.00 or equivalent in the disciplines mentioned against each post. OR atleast second class Master's degree followed by Ph.D. in the disciplines mentioned against each post.

31. **Assistant Professor of Physical Education (Yoga)** : (One) : Essential: (i) Second class BSH & PE/B.A.—BPE/ B.P.H. (ii) First class Master's degree in Physical Education or second class Master's degree in Physical Education with two years experience in teaching on Yoga culture. (iii) Diploma/ Certificate in Yoga Culture of a recognised institute.

32. **Assistant Scientist (Engg./Industries)**: (One) : (i) Bachelor's degree in Mechanical Engineering/Agril. Engg. in the first class or with an OGPA of not less than 3.2/4.00 or equivalent OR atleast second class Bachelor's degree in Mechanical Engineering/ Agril. Engg. followed by 2nd class Master's degree in Mechanical Engg./ Agril. Engg.

33. **Teacher (Zoology)** : (One) : (Leave Vacancy) : M.Sc. in Zoology with University degree/diploma in teaching OR M.Sc. in Zoology with at least two years experience of teaching in an English Medium School.

Note

1. For posts at Sr. Nos. 1 to 10 one or more qualifications relaxable in case of candidates found otherwise outstanding.
2. The minimum experience of 5 years and 10 years (including 5 years as an Associate Professor) is required for the post of Associate Professor and Professor respectively. The above experience will be counted after a candidate obtains his M.Sc. degree. Further, a period of 3 years towards obtaining Ph.D. degree shall be excluded from the experience.
3. Special weightage will be given to extension experience possessed by the candidates for posts in disciplines amenable to extension.
4. For posts at Sr. Nos. 11 to 30, persons who do not possess Ph.D. at the time of their selection shall not be allowed to cross the stage of Rs. 1,300/- in the scale of Rs. 700-40-1100-50-1600, till they complete their Ph.D.
5. No. of posts mentioned against each post may vary.
6. For all the posts, reservation for different categories will be as per Haryana Government Rules.

PAY SCALES

Sr. No. of post	Pay Scale	Total emoluments at the initial of the Pay Scale (exclusive of House Rent)
1 to 4	Rs. 1500-60-1800-100-2000-125/2-2500.	Rs. 2550/-
5 to 10	Rs. 1200-50-1300-60-1900.	Rs. 2205/-
11 to 32	Rs. 700-40-1100-50-1600.	Rs. 1509/-
33	Rs. 525-1050.	Rs. 871/-

REGISTRAR

KARNATAKA REGIONAL ENGINEERING COLLEGE SURATHKAL, D. KANNADA P.O. SRINIVASNAGAR-574157

Staff Recruitment

Applications in the prescribed form are invited for the following posts so as to reach the Principal not later than **15-5-1984**.

1. Professor: 1 (One) Post in the Civil Engineering Department (Rs. 1500-60-1800-100-2000-125/2-2500). Total salary inclusive of allowances in the minimum of the grade Rs. 2,489/-.

2. Asst. Professors: 2 (Two) Posts (Rs.1200-50-1300-60-1900). Civil Engg. 1. Mechanical Engg. 1. Total salary inclusive of allowances in the minimum of the grade Rs. 2,158.20.

3. Lecturers: 11 (Eleven) Posts (Rs. 700-40-1100-50-1600). Applied Mechanics—5, Electrical Engg.—1, Electronics & Communication—1, Mechanical Engg.—1, Metallurgy—2, Chemical Engg.—1. Total salary inclusive of allowances in the minimum of the grade Rs. 1,408.10.

Higher starts in pay will be considered in deserving cases. Qualifications for the post of Professor, Assistant Professors and Lecturers will be as prescribed by U.G.C./A.I.C.T.E. If candidates with post-graduate qualifications are not available or not found suitable for the post of Lecturers, first class Engineering Graduates may be considered for appointment as Lecturers.

In case a candidate for the advertised post is not found suitable for that post, the next lower position can be offered to the candidate, if he is found suitable for the lower position.

Further details concerning qualification etc. will be supplied along with the application form.

Application forms and details of prescribed qualifications and other particulars can be obtained by sending a crossed Indian Postal Order for Re.1/- (for each application form), payable to the Principal of the College at Srinivasnagar Post Office along with a self addressed envelope of size 25 x 10 cm. affixed with postage of Rs. 1.10.

B.S. Basvarajaiah
PRINCIPAL

UNIVERSITY OF DELHI

Advt. No. Estab. IV/87/84 **Dated : 19-4-1984**

Applications on the prescribed form are invited for the following posts:

Department	Designation
1. Zoology	Two Readers.
2. Psychology	One Professor.
3. Chemistry	(i) Two Professors. (ii) Two Readers.
4. Urdu	One Professor.
5. Political Science	(i) One Professor of Indian Politics. (ii) One Reader in Public Administration.
6. Law	Two Lecturers (one each for Campus Law Centre & Law Centre-I)
7. Chinese & Japanese Studies	(i) One Reader in Chinese Language. (*)(ii) One Reader in Chinese Economics. (*)(iii) One Professor in Japanese Politics. (*)(iv) One Reader in Japanese Language
8. University Administration	(i) Assistant Registrars/Administrative Officers/Assistant Controller of Examinations. (ii) Junior Assistant-cum-Typists (Hindi).
9. Physics & Astrophysics	(i) One Electronic Engineer. (ii) One Assistant Electronic Engineer. (iii) One Mast Mechanic. (iv) One Laboratory Attendant.
10. Delhi University Library System	(i) One Professional Senior (Temporary upto 7-1-1985). (ii) Semi Professional Assistants (some of the posts are reserved for Scheduled Caste, Scheduled Tribe & Ex-servicemen). (iii) Junior Library Attendants (some of the posts are reserved for Scheduled Caste and Ex-servicemen). (iv) One Transcriber.
11. Botany	(i) One Senior Technical Assistant (Artist) (Temporary leave vacancy upto April, 1985). (ii) One Laboratory Attendant.
12. Computer Science	(i) One Senior Technical Assistant. (ii) One Technical Assistant.
13. Engineer's Office	(i) One Store-Keeper. (ii) One Assistant Store-Keeper. (iii) Two Meter Readers (Elect. & Civil One each). (iv) Two Draftsmen Grade-I (One reserved for Scheduled caste). (v) Two Draftsmen Grade-II (One reserved for Scheduled caste).
14. Music	Tanpura Player.

(*) These posts have been sanctioned for 5 years period beginning 1983-84.

The Scales of Pay of the Posts are :

Professor : Rs. 1500-60-1800-100-2000-125/2-2500.

Reader : Rs. 1200-50-1300-60-1900.

Lecturer : Rs. 700-40-1100-50-1600.

Assistant Registrar/Administrative Officer/Assistant Controller of Examinations/Electronic Engineer : Rs. 700-40-900-EB-40-1100-50-1300.

Professional Senior : Rs. 1200-50-1300-60-1900.

Senior Technical Assistant/Assistant Electrical Engineer : Rs. 550-25-750-EB-30-900.

Technical Assistant / Draftsman Grade-I : Rs. 425-15-500-EB-15-560-20-700.

Mast Mechanic : Rs. 425-650.

Semi Professional Assistant : Rs. 380-12-440-EB-15-560-EB-20-640.

Store-Keeper/Draftsman Grade-II: Rs. 330-10-380-EB-12-500-EB-15-560.

Assistant Store-Keeper/Tanpura Player/Meter Readers/Junior Assistant-cum-Typist (Hindi)/Transcriber: Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.

Laboratory/Library Attendant : Rs. 210-4-250-EB-5-270.

All posts carry D.A., C.C.A. and H.R.A. as admissible under the rules in force in the University from time to time.

Essential Qualifications for Professorship

An eminent scholar with published work of high quality actively engaged in Research. Ten years' experience of teaching and/or research. Experience of guiding Research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Readership : (Other than Chinese & Japanese Languages).

Good academic record with at least second class Master's degree in a relevant subject with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) Research, or (ii) innovation in teaching methods or (iii) production of teaching materials.

Five years' experience of teaching in under-graduate, post-graduate classes and/or post-doctoral research work with evidence of published work.

Note: Second class would mean at least 50% marks in the subject or equivalent grade.

Readership in Chinese/Japanese Language . .

(a) Good academic record with atleast second class Master's degree in the relevant subject with a Doctor's Degree or equivalent published work.

Independent published work (in addition to the published work mentioned above) with at least 5 years teaching experience in Honours/Post-Graduate Classes essential.

OR

(b) M.A. in Chinese/Japanese Language and/or Literature and minimum of 5 years teaching, research or translation work and a Doctoral Degree or publications of equivalent standard.

OR

(c) A Lecturer in Chinese/Japanese with 5 years' teaching experience and a Doctoral Degree or publications of equivalent standard.

OR

(d) A Lecturer in Chinese/Japanese with a minimum of 10 years' teaching experience.

Good Academic Record Means

(i) A candidate holding a Ph.D. degree should possess at least a second class Master's degree; or

(ii) a candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) a candidate not possessing Ph.D. degree but possessing a second class Master's degree should have obtained first class in the Bachelor's degree.

Note: Second class would mean at least 50% marks in the subject or equivalent grade.

Lecturership in Law

Good academic record with at least Second Class (C in the seven point scale) Master's Degree in Law from an Indian University with the relevant specialisation or equivalent degree from a foreign University.

Professional Senior

(a) First or Second Class M.A/M.Sc./M.Com., plus a first or second class B. Lib. Sc. or diploma in Library Science. The degree of M. Lib. Sc. being a preferential qualification.
(b) At least 7 years experience as Librarian or in a responsible professional capacity in a Library.
(c) Good academic qualifications and research experience (with publications). The qualifications must be, in general, comparable to those of Readers in the Universities.

Assistant Registrar/Administrative Officer/Assistant Controller of Examinations

A Second Class Master's degree with 10 years office experience of which at least 5 years should be in a supervisory capacity.

Note: Relaxation of any of the qualifications may be made in exceptional cases in respect of Assistant Registrar/Administrative Officer/Assistant Controller of Examinations, on the recommendation of the Selection Committee.

Semi Professional Assistant

B.A./B.Sc./B. Com.

Certificate in Library Science/Diploma in Library Science.

Electronic Engineer

Bachelor's degree in Electronics/Communications/Telecommunications **OR** equivalent qualifications. Minimum experience of three years in design/fabrication and handling of Electronic equipment.

Assistant Electronic Engineer

Diploma in Electronics/Communications/Telecommunications **OR** equivalent qualification. Experience of three years in Fabrication and handling of Electronic equipment.

Senior Technical Assistant (Artist)

Diploma or Certificate in Arts from a recognised Institution. Experience of Scientific Drawings under different types of Microscope with or without camera lucide. Knowledge of preparing graphs, histograms, maps, charts etc.

Senior Technical Assistant (Computer Science)

1. Diploma in Engineering or Electronics or B.Sc. in Science/Mathematics/Math./Stat./Computer Science.
2. 3 years Programming experience in High level languages.

Store-Keeper

B. Com. with two years experience in handling large scale engineering stores.

Draftsman Grade-I

Matric with Diploma in Draftsmanship from a recognised Institution. Eight years experience as Draftsman.

Note: Experience can be relaxed for candidates having outstanding merits/record.

Draftsman Grade-II

Matric with Diploma in Draftsmanship from a recognised Institution with three years experience as Draftsman.

Technical Assistant

Diploma in Engineering or Electronics or B.Sc. in Science/Mathematics/Math. Stat/Computer Science.

Meter Readers (Electrical & Civil)

Matric examination from a recognised Institution with at least two years experience for reading water consumption meters and electric consumption meters as the case may be.

Tanpura Player

1. Sound knowledge of Music.
2. Proficiency in performance.
3. Ability to tune Tanpura & Sitar.
4. Ability to change strings of Tanpura and Sitar and to minor Jawari adjustment.

Transcriber

1. Higher Secondary/Senior Secondary School Certificate (10+2).
2. Knowledge of both Bharati & English, Braille.

Jr. Assistant-cum-Typist (Hindi)

(i) Matriculation or equivalent examination of an Indian University or an examination recognised as equivalent to.
(ii) Speed in typewriting at 25 w.p.m. in Hindi on the new key board.

Note: The candidates will be required to qualify the General Hindi Test and Hindi Typewriting Test conducted by the University.

Assistant Store-Keeper

Senior School Certificate Examination under 10+2 system or equivalent with one year experience in handling large scale engineering stores.

Mast Mechanic

Matric with Science Subject. About seven years experience in creations and maintenance of masts, aerials is essential.

Junior Library Attendants

Matric/Higher Secondary.

Laboratory Attendants

Should have passed matriculation or an equivalent examination with Science Subjects.

Special/Desirable Qualifications

Readership in Zoology

Candidates should have any one of the undermentioned 5 fields of specialization.

1. Limnology.
2. Animal Behaviour.
3. Animal Taxonomy.
4. Molecular Biology.
5. Genetics.

Readership in Chinese Language

Acquaintance with modern methods of Chinese language teaching.

Readership in Chinese Economics

Candidates with M.A. and Ph.D. in either Economics or History and who have done work in Chinese economic history will be preferred.

Professorship in Japanese Politics

(i) M.A. in Political Science.
(ii) Evidence of research in Japanese politics and foreign policy.
(iii) Proficiency in Japanese language.

Readership in Japanese Language

Acquaintance with modern methods of Japanese Language teaching.

Technical Assistant (Computer Science):

Experience of working with digital and micro-processor system.

Laboratory Attendant

Should have experience of working in a Laboratory.

Tanpura Player (Music)

1. Degree/Diploma in Vocal Music.
2. Persons having educational background are preferable.

Semi Professional Assistant (for Library of the Department of Modern European Languages):

(a) Russian or any other Slavonic language.
(b) French or any other Romanic language.
(c) German or any other language of the Germanic & Finno-Ugarian Group.

Junior Library Attendant

Certificate in Library Science.

The prescribed application form can be had from the Information Section of the University either personally or by sending a self addressed envelope (size 13 cm x 28 cm.) with postage stamps worth Rs. 3.45 P.

The candidates will have to produce the original documents relating to their age, qualifications, experience etc. at the time of interview.

Applications (separate for each post) accompanied by attested copies of Degrees, other certificates, marksheets, published research articles, etc. should be addressed to the Registrar. The last date prescribed for receipt of the application is **19-5-1984.**

Note

1. It will be open to the University to consider the names of suitable candidates for teaching posts who may not have applied. Relaxation of any of the qualifications may be made in exceptional cases, in respect of all teaching posts on the recommendations of the Selection Committee.
2. Canvassing in any form by or on behalf of the candidates will disqualify.
3. Candidates from outside Delhi, for teaching posts only, called for interview will be paid to and fro single second class rail fare.
4. The University reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant.

Madan Mohan
REGISTRAR

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University News

MAY 16, 1984

Re. 1.00

Dr. Prem Kirpal, Formerly Secretary to the Govt. of India, Ministry of Education & Culture, and Chairman of the Executive Board of UNESCO (left) and Prof. Bruno Dias Souza, Director, School of Planning and Architecture at the Third Convocation.

CLASSIFIED ADVERTISEMENTS

INDIAN INSTITUTE OF TECHNOLOGY : DELHI

HAUZ KHAS : NEW DELHI -11 00 16

Advertisement No. 10/84

ANNOUNCEMENT FOR STAFF POSITIONS

A. Posts/Pay Scales

Post	**Pay Scale**
Professor	Rs. 1500-60-1800-100-2000-125/2-2500 (Plus allowances as applicable in Government of India).

B. Centres and Specialisations for which Positions will be filled

Sl. No.	Centres	Post	Specialisation
1.	Centre for Bio-Chemical Engineering	Professor	Microbiological Engineering, Bioprocess development and Bioreaction Analysis and Design.
2.	Centre for Applied Research in Electronics	Professor (Temporary)	Under-Water Electronics, Underwater Communication and Sonar Signal Processing.
3.	Industrial Tribology Machine Dynamics and Maintenance Engineering Centre	Professor	Condition Monitoring and Maintenance Engineering in Machinery, Lubrication and Lubricants, Friction and Wear in Machines, Equipment Performance, Diagnostics and Machine Dynamics.
4.	Centre for Atmospheric Sciences	Professor	Atmospheric Science with special reference to Numerical modelling in Ocean, Atmospheric Systems, Air Pollution & Modelling.

C. Minimum Qualifications/Experience Prescribed for Appointment

For Centres mentioned at Sl. No. 1 to 3 of Column 'B' above.

An eminent scholar with published work of high quality actively engaged in research. Ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding Engineer/Technologist with established reputation who has made significant contribution to knowledge.

For Centre mentioned at Sl. No. 4 of Column 'B' above.

Good Master's Degree/Doctorate degree in appropriate field with minimum 7-10 years distinguished teaching experience in Institution of University standard at post-graduate level, specialised knowledge in one or more specialised fields with experience in guiding research. Professional, Scientific work of outstanding merit and Doctorate degree would be preferred.

Prescribed application forms with detailed particulars may be obtained from the Deputy Registrar (E-I), Indian Institute of Technology : Delhi, Hauz Khas, New Delhi 110016 either in person or sending by post, a self-addressed stamped envelope (size 10 x 23 cm) bearing postage stamps of 95 paise latest by **23rd May 1984**. Last date for submission of application forms along with Indian Postal Orders in favour of Registrar, IIT, Delhi worth Rs 7.50 (Rs. 1.87 for SC/ST candidates), is **7th June 1984** for candidates in India and **14th June 1984** for candidates abroad.

ALIGARH MUSLIM UNIVERSITY

ALIGARH

(Advertisement No. 4/84-85)

Applications on the prescribed form are invited for the following posts :

1. **Lecturers in Psychology (Two posts) (Temporary but likely to become permanent) Department of Psychology.**
2. **Lecturer in Psychology (One post) (Temporary but likely to become permanent) Women's College.**

Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances

Qualifications

I—Essential

(a) A Doctor's degree or research work of an equally high standard.

(b) Consistently good academic record with first or high second class (B in the seven point scale) Master's degree in the relevant subject or an equivalent degree of a foreign University.

II—Desirable

For post No. 1, Lecturers in Psychology, Department of Psychology.

(i) Some experience of teaching and/or research. Preferably in Clinical Psychology and Measurement or Comparative and Physiological Psychology (For one post).

(ii) Social, Industrial or Experimental Psychology (For other post).

For post No. 2, Lecturer in Psychology, Women's College.

Some experience of teaching and/or research.

Having regard to the need for developing inter-disciplinary programmes the degrees in (a) and (b) above may be in relevant subject.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a consistently good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at-least two years or has practical experience in a research Laboratory/Organization on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within five years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

Note: Those candidates who have applied in response to Advertisement No. 1/84-85 dated 5th April, 1984 need not apply again. They will be considered on the basis of their earlier applications if eligible.

Higher initial start may be given to candidates possessing exceptional qualifications and experience. Candidates interviewed may be paid contribution towards their T.A. equal to one single second class Railway fare only.

Prescribed application forms and instructions may be had from the Assistant Registrar (Selection Committees) Registrar's Office, A.M.U., Aligarh on payment of Rs. 5/- in cash (to be deposited in the Cash Section, Finance Office, A.M.U., Aligarh) or through an Indian Postal Order payable to the Finance Officer, A.M.U., Aligarh either personally or by sending a self-addressed Stamped envelope of 23 x 10 cm. **Last date for receipt of applications is 31st May, 1984 (upto 4.00 P.M. only). Incomplete applications and those received late will not be considered.**

Note: Suitable persons may be kept on panel for future appointment.

Zamir Ahmed Khan
REGISTRAR

UNIVERSITY NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :
M.S. RAMAMURTHY

AIU Sub-Committees Meet

During April, 1984 AIU organised a series of meetings in New Delhi to consider several important issues. The Sub-Committee on **National Aptitude Testing System** was attended by Prof. M.S. Gore, Vice-Chancellor, University of Bombay & President AIU, Prof. Rais Ahmed, Vice-Chairman, UGC, Dr. M.M. Chakrabarty, Vice-Chancellor, Jadavpur University, Dr. H.D. Tandon, Director, AIIMS, Shri Suresh Mathur, Secretary, UPSC, Shri P.N. Rau, Secretary, ICAR, Shri S.K. Sharma, Resident Commissioner, M.P. Govt., Prof. H.S. Srivastava, NCERT. The **Cultural Committee** was attended by Prof. M.S. Gore, Vice-Chancellor, University of Bombay, Prof. K.S. Hegde, Vice-Chancellor, University of Mysore, Dr. C.L. Anand, Joint Educational Adviser, Ministry of Education & Culture, Prof. Mohan Maharishi of the Department of Indian Theatre, Panjab University. The Sub-Committee on **National Policy for University Libraries** was attended by Prof. K.S. Hegde, Vice-Chancellor, University of Mysore, Dr. S.S. Johl, Vice-Chancellor, Punjabi University, Dr. Jagdish S. Sharma, Librarian, University of Jammu, Prof. P.N. Kaula, Visiting Professor of Library Science, University of Lucknow, Mr. K.S. Deshpande, Librarian, Karnatak University, Dr. R.L. Mittal, Librarian, Punjabi University, Prof. T.K.S. Iyengar, Librarian, Indian Institute of Science, Bangalore. The **Building Committee** Meeting was attended by Prof. M.S. Gore, Vice-Chancellor, University of Bombay, Dr. O.P. Jain (former Director IIT, Delhi) Consulting Engineer, Prof. N.M. Swani, Director, IIT, Delhi and Shri P.B. Vijay, Institute Engineer, IIT, Delhi.

The Committee set up to consider the programme of the **Diamond Jubilee Celebrations of AIU** was attended by Prof. Rais Ahmed, Vice-Chairman, UGC, Prof. Gurbakhsh Singh, Vice-Chancellor, University of Delhi, Shri Kanti Chaudhuri, Vice-Chancellor, Rani Durgawati Vishwavidyalaya, Dr. Sukhdev Singh, Vice-Chancellor, PAU, Dr. R.S. Misra, Vice-Chancellor, Lucknow University.' The Sub-Committee to consider the **In-Service Training Programme for University Administrators** was attended by Prof. M.S. Gore, Vice-Chancellor, University of Bombay, Dr. S.N. Mehrotra, Vice-Chancellor, Jodhpur University, Dr. B.M. Shukla, Vice-Chancellor, Gorakhpur University, Dr. M.M. Chakrabarty, Vice-Chancellor, Jadavpur University, Dr. R.S. Misra, Vice-Chancellor, Lucknow University, Dr. Sukhdev Singh, Vice-Chancellor, PAU, Prof. N.M. Swani, Director, IIT Delhi, Shri Kanti Chaudhuri, Vice-Chancellor, Rani Durgawati Vishwavidyalaya, Jabalpur and Shri P.N. Bhandari, Vice-Chancellor, Mohanlal Sukhadia University, Udaipur. The Sub-Committee to consider the **Rotation of Heads of Teaching Departments in Universities** was attended by Prof. M.S. Gore, Vice-Chancellor, University of Bombay, Dr. M.M. Chakrabarty, Vice-Chancellor, Jadavpur University, Prof. N.M. Swani, Director, IIT, Delhi. Dr. Sukhdev Singh, Vice-Chancellor, PAU, Dr. S.N. Mehrotra, Vice-Chancellor, Jodhpur University, Dr. B.M. Shukla, Vice-Chancellor, Gorakhpur University, Shri Kanti Chaudhuri, Vice-Chancellor, Rani Durgawati Vishwavidyalaya, Jabalpur, Shri P.N. Bhandari, Vice-Chancellor, Mohanlal Sukhadia University. Udaipur, Dr. R.S. Misra, Vice-Chancellor, Lucknow University. The Sub-Committee to consider the **Training Programme of University/College Teachers** was attended by Prof. M.S. Gore, Vice-Chancellor, University of Bombay, Dr. M.M. Chakrabarty, Vice-Chancellor, Jadavpur University, Shri Kanti Chaudhuri, Vice-Chancellor, Rani Durgawati Vishwavidyalaya, Jabalpur, Prof. N.M. Swani, Director, IIT, Delhi, Shri P.N. Bhandari, Vice-Chancellor, Mohanlal Sukhadia University, Udaipur and Dr. Sukhdev Singh, Vice-Chancellor, PAU.

The recommendations of the above Committees will now be considered by the Standing Committee of AIU which is scheduled to meet on May 20, 1984 in New Delhi.

Librarians—An Endangered Species? A Search for Identity

T.K.S. Iyenger*

This may not be so. But over the last 30 years several librarians, students of library science with whom I have been closely associated with, have expressed to me some of their concern about Librarianship and its professional identity. In India, to a large extent, it does appear in some academic campuses, it is not fully recognised profession in the eyes of the clientele. In addition there exists a conflict in definition. The Librarians who have developed certain common values at field level should bring forth this to the forefront than remain under a professional guise. The field values should be explicit and by being specialists, librarians made aware the clientele about the nomenclature, availability of data-bases and the system of S.D.I. which has now become a new entry point to scientists who may even like to change their field of specialization. I myself had shared my views on this when our esteemed paper HINDU took this issue of information science on its outlook feature some years back along with Dr. Seshagiri and others.

Definition

The nature of a professional librarianship is somewhere in the middle of a professional and non-professional continuum. This has some advantages. It is a full-time occupation specializing in a certain area and is not subordinate to any other group in the same situs, such as nursing is to doctoring in medicine. Related to this is the fact that librarians have a sense that their occupation is unique. Librarians are closely attached to learning, which is a prime source of occupational prestige in our society. In addition, an increasing number of librarians are trained in professional schools, many of whom are associated with universities and offer advanced degrees. They belong to professional associations at State, National and International levels. But librarianship, probably lacks two key attributes that keep it from becoming fully accepted as a profession. One is a prolonged specialized training in an abstract body of knowledge. The second is collectivity or service orientation, in terms of professionally defined "needs" of its clients, rather than what its clients simply "want." Also the library profession, to some extent, has failed to develop a general body of scientific knowledge dealing with Information Storage and Retrieval, but depend upon rather rule-of-thumb local regulations and rules, plus a major cataloguing system for most of its day-to-day work. The sophisticated training in IR methods, if not pursued, certainly give a back door entrance to competition among scientists who are seeking for branded identity.

The One-Way Conflict

Public do not believe that the librarian has a knowledge base specific to his occupation. They feel that the librarians are gate-keepers and custodians to a "stockroom" of books and periodicals. This aspect, if true, seems to be intensified by the fact that the public largely meets only the unskilled and semiskilled help in libraries and judges the trained librarians who work mostly away from the eyes of the public, by the performance of the help. Another factor related to the knowledge base is that the librarian begins to assume administrative tasks earlier than in most other occupations. Much of this administration is not specific librarianship, for it consists instead of integrated human beings in a corporate enterprise and not in pushing back the frontiers of knowledge in the field. Some librarians even argue that such an administrative emphasis is properly a central task of librarians. In fact, status or prestige today seems to be achieved in the field mostly by administration; that is in taking on more administrative responsibility rather than being distinguished as specialist. This obviously is true among some scientists, who cease to be scientists when they become administrators.

Without a firm knowledge base and its recognition by the relevant publics, librarians cannot easily claim autonomy and control over their own affairs. Closely related to this is the definition of service orientation that most librarians give themselves. Most librarians abdicate much of their autonomy from the start in an effort to please their clients. "Serving" the clients means "helping" learning his wishes and satisfying them. "Serving" does not seem to mean to librarians in general defining what is best for the client in terms of some set of professional standards, of concern and giving that to the client.

The Librarian works within his client's wishes, instead of imposing his professional categories, conceptions and authority on his clients. In other words, librarians seem to respond to the expressed "desires" of clients instead of the "needs" of clients as defined by a body of professional library knowledge.

Endangered Species

The librarians were concerned and threatened with their status and that this concern was reflected in conflict with their clients. The more librarians were concerned about the status of their field the

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**Librarian, Indian Institute of Science, Bangalore.*

more they reported and seemed to have conflict with clients that might be regarded as being a threat to their own status. Many librarians have expressed the following:

—Some faculty feel our ignorance is so great that we are a danger to them and the system and, in this context, an "endangered species." They have a low opinion of a professional librarian. The faculty has a feeling that librarians are incompetent in their areas. They look down at librarians for their lack of academic degree background.

—Many times the faculty think, we do not know what we are talking about. They have a feeling that librarians cannot possibly know what materials they want. Faculty members use the library only from their own point of view. There is an interpretation of rules so as to benefit their own areas.

—Some faculty members refuse to learn how to use the library. They have a feeling of "instantism." That is, everyone having his own copy of a book. There is a backlash and the faculty blowing up for some minor thing happening in the library.

—They are unreasonable. Some of them use cuss words on the phone and demand things that we can't give under the university code and policy. The librarians always become a whipping boy for the faculty frustrations.

--In addition to their own frustrations, lack of identity and keen competition, they have tried to take up librarianship through back door under guise. They have all the time in the world to do the librarian's job.

Super Clients

There are differences among clients. Take the general area of the sciences, for example. This area is a good choice because much research about the information needs and uses has focussed on scientists.

Younger scientists may differ in their information needs and uses from older scientists. It may be that younger men as they attempt to master a fresh field may depend more heavily upon written sources than do the older men. The older men, having had time to establish a niche in their discipline, may rely more heavily upon invisible colleges of colleagues and verbal communications.

There are other differences in the disciplines, too. For example, creativity reaches a maximum at different ages in different disciplines. The evidence, in general, indicates that physicists, biologists and chemists can be expected to make their major contribution before their thirties or not at all. Individuals in other areas, such as geology, may be expected to make their major contributions much later in life.

Proliferation of Information

Today there are great pressures toward publication. Competitive pressure for priority in science is so great that there is a rush to get into print even before an experiment has actually been performed. One might think there is hardly time left for research with all the reprints, requests for reprints, prepublication copies, inquiries concerning published work, correspondence relating to general scientific issues, journals, books, pamphlets, technical reports, grant requests, conferences and other forms of written or printed communications. To top it off, the half-life of research in science, the time in which half of the research done becomes obsolete is decreasing. At present, in the bulk of the natural sciences, it is only about five years.

There is an explosion of information and a problem of handling it. Some have tried to cope with the explosion by proposing the use of qualitative control devices. In general, these proposals place the burden of control on journal editors who evaluate articles for publication. This approach restricts the number of articles per journal but probably increases the number of journals. In addition, information regarded as insignificant in a given context today may be regarded as invaluable at some future date. There is a problem of values and the change of values. Other proposals emphasize the improvement of information dissemination and retrieval. An effort is made not to stem the avalanche but to disperse it. This is not viewed as the job of editors but of librarians and other information specialists. These proposals tend to view the librarian as the efficient technician who has no part in the information process except to handle "dirty" details of information distribution. Despite the high-sounding rhetoric, the librarian becomes the "water boy" on the team, an efficient handler of information, but little else.

Librarians in reality are much more. They not only handle information, they create, select and evaluate information. They give priorities to information.

When compared to other profession, perhaps, librarianship does not have the sense of moral urgency and awareness. Library profession, seems to lack a sense of drama, a task, a destiny, a set of issues about which it is concerned whereas science has pollution, energy, health etc., and such areas where a scientist can have his brand and band wagon.

Professional Identity—Plan of Action

Librarians must develop a consciousness of themselves. They must assume their importance and work toward their acceptance. They cannot be scabs to each other. When a librarian, in effect, after several years of work, is harassed for no reason, librarians should not allow that to happen. They should decide for themselves in terms of their values. Even a union would not allow a co-worker to be harassed unless they felt it was just. Even

(Contd. on page 6)

Higher Education in Orissa

Sailabala Debi*

Introduction

In educational development, Orissa is one of the most backward States of the country. The 1981 Census shows that 34.12 per cent of the State's population are literate. The literary rate among males is 46.90 percent and among females 21.11 per cent which is less than half of the male literacy rate. At the beginning of the planning era the per capita expenditure on education in Orissa was the lowest in the country. The State has, therefore, made consistent efforts to allocate as much funds as possible for the development of education. Thus from a mere Rs. 1.25 crores in 1951-52 the expenditure on education had gone up to Rs. 71.86 crores by the end of the Fifth Five Year Plan. The per capita expenditure on education in Orissa was only Rs. 32.5 in 1978-79 as compared to Rs. 68.3 in Kerala, Rs. 53.9 in Punjab, and Rs. 35.8 at all India level. However, the need for this sector is much more than it has been possible for the State to provide.

Growth of Higher Education

When the new State of Orissa was formed in 1936, there were only 5 colleges in the State. Of these 4 were Arts and Science Colleges and one Teacher's Training College. In 1943 the Utkal University was established and higher education began to expand. Before that, Ravenshaw College was the only College having post-graduate teaching in English. At the time of Independence (1947-48) there were 11 Arts and Science Colleges and one Medical College affiliated to Utkal University with an enrolment of 3,885 students out of which 219 were girls i.e. only 5.64 percent were girl students. The Radhakrishnan Commission (1948) profoundly influenced the development of higher education in the post-independence period. As a result there was a growing demand for higher education in the State. The number of colleges increased to 14 including four Intermediate Colleges and one women's College with an enrolment of 6,671 at the beginning of the First Plan. The Intermediate Colleges provide two year courses and the Degree Colleges provide four year courses after the matriculation examination. Post-graduate courses for M.A. & M.Sc. degree cover a period of two academic years after graduation. During the First and Second Plan, one Teacher's Training College at Anugul, one Engineering College at Burla and some Intermediate Colleges were established in different parts of the State. The number of colleges increased to 36 with an enrolment of 12,977 boys and 1,742 girls. Now the percentage of girl-students to total enrolment increased to 11.84%. During the Third Plan 26 general colleges, one Engineering College (REC) at Rourkela, one Medical College at Berhampur and another at Sambalpur and Regional College of Education at Bhubaneswar were started. With the introduction of 3 year degree course all the existing Intermediate Colleges were upgraded to Degree Colleges during the Third Plan. Orissa University of Agriculture & Technology was started and Post-Graduate Department in a number of subjects were opened by Utkal University during the Third Plan.

The Government of Orissa appointed a Committee headed by Dr. Parija, the then Vice-Chancellor of Utkal University in 1963 to examine the need for more Universities in Orissa. In pursuance of the recommendations of the Committee two more Universities in Berhampur and Sambalpur having 10 and 11 Post-Graduate Teaching Departments respectively were established in 1966-67. In 1970 a Regional Centre of Institute of Indian Languages was set up in Bhubaneswar to train teachers in second languages. In 1971 an advance Research Institute of Physics was started. The programme during Fourth Plan was confined to the consolidation of existing colleges on the basis of the recommendation of the Kothari Commission. The Fifth Plan aimed at consolidation of the existing institutions, expansion of facilities for part-time education, correspondence courses, introduction of semester system, development of research facilities and improvement of women's education. Adult education schemes were taken up on a priority basis by the Government during this period.

The Sixth Plan aims at restricting quantitative expansion and improving the qualitative development of higher education. The growth of higher education in Orissa is presented in Table-1.

Table-1 indicates the annual growth of enrolment in higher education as 9.9 percent only which is not very much encouraging as against the secondary education where the growth in enrolment was 10.7 percent.

Financing Higher Education in Orissa

The financing of higher education in the State, both in private and public sector, has been a recurring problem since independence. The resources of the State are inadequate for quantitative and qualitative development of education.

The major financing agency for education in the State is Government. Besides, the local bodies and private individuals also provide finance for the educational development of the State.

**Deptt. of Analytical & Applied Economics, Utkal University.*

Information ...
19 JUN 1984
C.T.R.I., MYS

Table No. 1

Development of Higher Education in Orissa

(1950-51—1979-80)

Year	No. of Colleges	No. of the Universities	Enrolment in Colleges & Universities	Percentage of enrolment to population in the concerned age-group	No. of teachers in Colleges & Universities	Pupil-Teacher Ratio
1	2	3	4	5	6	7
1950-51	14	1	6,282	0.4	298	21
1955-56	14	1	5,915	0.3	355	17
1960-61	29	1	11,139	0.7	656	17
1965-66	62	1	23,458	1.7	1,532	15
1968-69	72	4	37,037	1.7	1,969	19
1969-70	77	4	41,790	1.7	2,160	19
1973-74	85	4	62,620	2.0	3,097	20
1977-78	92	4	79,143	2.6	4,027	20
1979-80	139	4	99,709	3.1	5,364	19

Source : Directorate of Public Instructions, Orissa.

The expenditure on education is classified as plan and non-plan expenditure. The allocations made for meeting the expenditure for implementing various schemes included in the Five Year Plans constitute the plan budget. All other items of expenditure and receipt and funds needed to maintain the level of development reached in the previous plan constitute the non-plan budget. Table 2 presents the growth of State expenditure on education in respect of primary, middle, secondary and higher education between 1950-51 and 1977-78.

Table No. 2

Total State expenditure on different stages of education

(Rs. in lakhs).

States of education	State Expenditure 1950-51	State Expenditure 1977-78	Compound rate of growth %
Primary Education	24.37	2,811.04	19.23
Middle School Education	18.08	1,586.18	18.02
Secondary School Education	12.06	1,007.00	17.81
Higher Education	12.03	1,028.00	17.91
Total	66.54	6,432.22	18.45

Source : Education in Orissa, 1978.

Table No. 2 shows that the growth rate of primary education expenditure is the highest and the growth rate of higher education is not as encouraging as it should be. Table-3 exhibits the percentage of expenditure on different stages of education to total expenditure on education in Orissa.

Table No. 3

Proportion of Plan and Non-plan outlay on different stages of education to total outlay on education in Orissa*

Plans	Percentage of outlay on different stages of education to total outlay on education: Primary & Middle	Secondary	Higher
First Plan	57.33	11.70	6.75
Second Plan	50.05	16.80	2.83
Third Plan	64.98	15.42	13.39
Fourth Plan	60.29	17.27	15.66
Fifth Plan	69.57	9.56	12.10

Source: Directorate of Public Instructions, Orissa.

*This expenditure excludes Games, Sports, Administration & Supervision, Hindi & Sanskrit.

It is revealed from Table No. 3 that percentage share of elementary education is the highest. It is found that the percentage share of higher education falls far short of that on elementary and secondary education except during the Fifth Five Year Plan. The expenditure on higher education as a percentage to total expenditure on education is very negligible. It varies from about 3% to 12% during all the plans as shown in Table No. 3. The expenditure on higher education is increasing at a slow rate but it is very much uneven.

Concluding Remarks

It is observed that though there has been a rising trend of expenditure on education since the First Five Year Plan to the end of the Fifth Plan, yet the standard of education could not be raised according to the target. This is largely due to the reason that nearly 90 percent of the total allotted funds were utilized to meet the salaries of teachers. Hence the expenditure on higher education should be increased and subsidies should be provided to the poor and meritorious students in terms of scholarships, free-studentship etc. to pursue higher education.

Since Universalization of primary education is the main objective of the Government of India there has been a quantitative expansion of primary education in the State. Primary education in the State has been provided free of cost to the students. But development of Primary education is not the only condition to make the country developed. It may be one of the necessary conditions for development but not a sufficient condition. Higher education can fulfil the sufficient condition for development as it brings out built-in potentialities of a person, increase the consciousness among the masses towards political, social and economic development, Higher education is considered as one of the few sure roads to success. Hence, Orissa needs qualitative expansion of higher education for its overall development. The quality of higher education is of vital significance as it accelerates the process of development.

Generally it has been observed that the pattern of education followed in Orissa is more or less of traditional type. There should be academic reforms in our educational system to adjust to the needs and environment. In the rapidly changing world University education should introduce a dynamic system of education in order to achieve all the objectives of socio-economic development. We have still to achieve the objective of eradicating poverty to establish an egalitarian society which can be performed better by the educated persons.

Another important aspect which needs to be emphasized in our education system is that our education should be employment-oriented. This can solve to some extent the problems of unemployment which is a vital problem in our State. The education system should be such that the students get work-education during their course of education. In case the students do not get any employment, they can start their own work and earn their livelihood. As a result the students become more self-sufficient. Taking all these factors into consideration higher education is considered as one of the important instruments of socio-economic development. Hence, an urgent need for qualitative improvement of higher education. And, an employment-oriented higher education in Orissa is also called for. □

Librarians—An Endangered Species?

(*Contd. from page* 3)

faculty in universities have formed unions now. And would they allow a fellow union member to be harassed? How can librarians even call themselves professionals, when they rush in to form groups?

Until librarians as a group develop a clear sense of professional identity and are willing to commit their lives to it, they will remain the prostitutes that they appear to be.

Of course, conflict is not an end in itself. But a certain amount of creative tension may be necessary if librarianship is to fully experience its potential. Once librarianship defines its values, those values may be a threat to others. Tension may then result. But if the tension is avoided at all costs, whatever values librarianship has, will disappear. With no values, librarianship will be no threat and there will be no tension. Tension indicates values, commitment and a moral struggle.

No longer can librarians work as individuals under the guise of a field whether they brand themselves Documentalists or Information Scientists. As a group they must work together for the recognition they deserve as being in an indispensable part of the knowledge process. This struggle may cost them—and cost them a lot but—they dare not avoid it. It is for their interest and the interest of their society that they meet the challenge.

It is not a question of librarians becoming professional or not. They must be professional. Their position now is not inherent. They are not inherently clerks, custodians or co-outs. They are potentially librarians. Librarians must recognise that they can change their position, if they will. In fact, they must.

But the question is, are they—are they willing to pay the price or they willing to put up humiliations due to wide imaginations. The answer is yours. □

Dr. Prem Kirpal Addresses Convocation of School of Planning and Architecture

Excerpts from the convocation address delivered by Dr. Prem Kirpal, formerly Secretary to the Government of India, Ministry of Education & Culture, and Chairman of the Executive Board of UNESCO, at the School of Planning and Architecture, New Delhi on April 19, 1984.

Convocation

"...I take this opportunity to share with you a few thoughts on Education and Humanism which have been my life-long quests, and which have also moulded the objectives and the horizons of your school, projecting as it does some new trails into the future of education and its impact upon society and life's quality.

Education and New Humanism

In our times the growing force of democratization, the emerging concept of life-long education and the new opportunities provided by the revolutionary technologies of communication hold the promise of joining education and culture together in a new enterprise to liberate the spirit of man, to enrich his mind and to project and practise human values in the service of man and his humanity. The new goals and vistas of education recognise and value the integrity and diversity of cultures while seeking the universality of thought and reason and moving toward the common values and tasks of humanity, now, confined to the space-ship earth struggling in a sea of mounting difficulties and perils as well as fantastic opportunities and hopes.

The education of the future providing for man's total life span must be oriented to his fulfilment as an individual person, as a creative worker, and as a member of his society, at national, regional and global levels. The educational programmes and processes should be related to the needs of contemporary man looking toward a fast-changing future. The integrity, ability and wholeness of man, achieved through a new system of education is the most precious asset of the individual and his society, and it is this aim which needs now to be translated into a curricular content required by the emerging conditions and opportunities of the present time and the particular circumstances of each society. Such a curricular content of educational programmes and experience at all levels needs to be conceived and planned in the context of life-long education aiming at a fresh adventure in learning that is primarily directed to the development and sustenance of the learner's integrity as a free and creative person and his independence of mind and spirit.

Our present age in history which is witnessing for the first time the emergence of a global civilization is confronted with a challenge of unparalleled dimensions. The challenge lies in the fact that man's technology and the social organization have far outstripped his spirit, resulting in a state of confusion and chaos and the loss of moorings and directions; what we need now is a great renewal of the spirit of man to redress the balance of the three inter-acting forces in the making of civilization. The worth and dignity of the individual person are threatened by the brute force and senseless behaviour of the impersonal mass of machine and society. Human values and aspirations cannot survive without a fresh strengthening of their sources and the enrichment of their content. The urgent need for a renewal and resurgence of the spirit of man calls for a revolutionary transformation of education alongwith other developments and creations. The concept of life-long education arises from a growing crisis of contemporary civilization; life-long education is required to fulfil the need of contemporary man to control, adapt and create the relevant technology and social organisation for a new quality of life and for a meaningful quest of more effective and appropriate values of the spirit. At the same time life-long education has become possible and has even entered the realm of realistic action owing to the human and technological developments of a global civilization.

The quest for quality of life toward a new humanism

The emerging global civilization, with all its brilliant potentialities for the welfare of man, continues to be fragile and perilously exposed to the dangers inherited from the past, especially the scourge of war and destruction. The foundations of peace must be constructed in the minds and hearts of men as the constitution of UNESCO so eloquently proclaims.

Such a foundation of peace and human brotherhood must rest upon a new fabric of values to live by. The material power of man emanating from the fruits of science and social organisation fed by the acquisitive instinct rooted in both greed and adventure often leads to unbridled affluence and waste, self-centredness, aggression, sense of insecurity, triviality of expression and vulgarity of taste. These pitfals of material opulence need to be checked and eliminated by the pursuit of a quality of life based on the practice of human values. The concept of quality of life is an emerging vision of our times, specially reflected in the spirit and attitudes of the youth. The changing role and cultural values of youth is a contemporary phenomenon about which little research has been attempted so far. There are also signs of revulsion against obsession with economic growth, conspicuous affluence and gross consumption. The measure of GNP is being questioned and new ways of attaining and evaluating happiness are stressed by creative people in all walks of life. The concept of quality of life needs deeper exploration, but it has undoubtedly become an important goal of development now. Each society must seek its own quality of life from the roots of the past, the strivings of the present and the vision of the future; but there are certain human values which could be sought and shared by all. The concept of quality of life is in essence the vindication of the human spirit which was weakened by the worship of mammon and machine.

“The human spirit is now fortified by the attitudes and fruits of science and a new assertion of humanism. The humanism of the past was based upon man’s discovery of himself, followed by liberation from taboos and dogmas accepted in fear, superstition and unreason. The humanism of tomorrow seeks to substitute love for power, stresses upon the brotherhood of man and his common humanity and probes towards a new relationship of man with his cosmos. It aims at an act of transcendence which is within the reach of man, who is now more than ever the maker and arbiter of his destiny. The final aim of life-long education is transcendence from the confused and troubled state of contemporary man to a new humanism, both human and cosmic, free, wise, compassionate and loving, and ever aspiring to the light on the high hills and the stars beyond.

“Such a vision of the future is implicit in the contemporary idea of Evolutionary Humanism, so well described by its celebrated exponent, Julian Huxley, the first Director-General of UNESCO. Let me recall his own words written in 1957 ;

> “If asked to name the most remarkable developments of the present century, I suppose that most people would say the automobile and the aeroplane or the cinema, the radio and TV or the release of atomic energy, or perhaps pencillin and the antibiotics. My answer would be something quite different—man’s unveiling of the face and figure of the reality of which he forms a part, the first picture of human destiny in its true outlines.
>
> “This new vision is based upon the enlargement of knowledge, not only or even mainly (as laymen and I fear also many scientists seem to think) in the natural sciences, but equally in the social sciences and the humanities. .
>
> “During my lifetime, I have seen its gradual emergence piece by piece...
>
> “From these bits and pieces of new knowledge, new realizations and new understandings, man is capable of forming a new picture of himself, of his place in nature, his relations with the rest of the universe, his role in the universal cosmic process—in other words, his destiny; and on that, in turn, building new and more adequate beliefs.” (Julian Huxley—New Bottles for New Wine—London, 1957-Preface).

“The most important of these beliefs to be built on such a concept of man’s destiny lies in a new approach to the significance and process of education required by its global horizons and the growing quest for the quality of life and a more universal humanism.

A New Concept of Education

“Modern education is a process of learning from real life and from the pulsating, dynamic society around us. The learning should be at the choice and pace of the learner and proceed for all his life span through all appropriate ways and modalities available to the changing society. Education must stem from the roots of society, share its living conditions and problems and strive towards the fulfilment of its goals and aspirations. It is only in this way that education becomes relevant to life and can make its own contribution to the development of the individual as well as the well-being of the society. Life-long learning from all external sources and inner experience is both the process and purpose of education and the way of receiving and using one’s learning determines the range and quality of life experience. The education of tomorrow will comprehend the multiplicity of learning situations and techniques, sharpen flexibility for quick and frequent adaptation, multiply manifold paths and choices, and endeavour to serve the ceaseless process of increasing our awareness, facilitating the full expression of personality and contributing to that impulse and urge towards transcendence which is the most precious heritage of India’s culture and also the conscious and growing need of our own times. In all possible ways such a comprehensive concept of education should be applied wisely and resourcefully to the needs of man as citizen, as worker and as a person, enriching human relationships, developing initiatives and skills, and above all giving full scope to that creative spark which expresses itself in the search for goodness, truth and beauty; thrives on freedom and solitude and gives meaning to the life and the vision of the individual person. This is a vast and complex task, but it is the only way for us to view the education of the future. The task may seem impossible to realise, but the endeavour is full of fascinating possibilities and calls for great adventures of thought and effort; and success awaits those who will do and dare.

“And what can we do and dare from the activities and aspirations of the School of Planning and Architecture? If contemporary man is now the arbiter of his destiny, and not merely a passive creature of evolution, as Julian Huxley believed, his first task is to mould for himself a more harmonious and creative environment and his foremost concern is to achieve a happier quality of life. The concerns of your School, arising from the horizons of the future revealed by man's power and potentials, have a crucial bearing upon the development of India's ancient culture and our new aspiring nation.

"It is my hope and my dream that a consortium of national institutions, such as yours, involved in higher education and research, would transform our country by planning and achieving a new design of living for the masses of our people in town and country-side. The great challenge is to transform the poor and squalid village of the past into new, modern townships by designing an environment which joins culture and technology for the welfare, comfort and happiness of man, and for the harmony and creativity of his society. The union of science and spirituality, tradition and modernity, culture and technology, can be the unique achievement of Modern India. May your Institute and its various disciplines of study and research contribute to the attainment of this goal! I wish you much happiness and success in your efforts and achievements which can truly revolutionise our great society and also help others in the pursuit of the noble tasks of development and quality of life.

"In conclusion I should like to recall a significant remark of Dr. Julius Stratton, President of the Massachussett Institute of Technology, at the celebration of its centenary in 1960:

"Science, in sum, gives us knowledge and power of action. It tells us what we can do, we must turn elsewhere to learn what we ought to do. There is no certitude in man's affairs, and we learn by trial and error; but the errors are becoming increasingly expensive. For guidance we must turn to the accumulated record of all human experience, to the ethical teachings of our religious faiths, to the understanding revealed by systematic study of human behaviour. These are the strands that through education must be interwoven with science and technology to form the fabric of a single culture, and the hope of a harmonious and peaceful world."

"Let us hope that the Indian Education of the emerging future, symbolised by new institutions such as yours, will be directed to this path of synthesis and integration for building a great new society from its ancient, immortal roots!" □

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A Report

Annamalai Varsity's Seminar On Examination Reforms

The first step towards reforming the present system of examination followed at the Annamalai University was taken with the organisation of a Seminar on 'Examination Reforms' on 24.4.84 and 25.4.84 in the Senate Hall. This was attended by all the Heads of Departments of Study, who also happen to be the Chairmen of their respective Boards of Studies, in addition to one Reader and one Lecturer from each Department. Prof. Natarajan, Project Director (Exam.) of the Association of Indian Universities served as the Director of the Seminar.

Prof S.V. Chittibabu, Vice-Chancellor of the University in his inaugural address, dwelt at length on the deficiencies of the present system of examination prevalent at the various Indian Universities. He then referred to the recommendations of the various Commissions such as the Radhakrishnan's University Commission and the Kothari Education Commission pointing out the crippling effect of the examination system on the quality of teaching done at the University level. He said that if there is any single measure which would surely result in the qualitative improvement of higher education, it is the reforming of the present system of examination. He also stressed the need for continuous internal assessment of the pupils' progress since it would make them concentrate on their studies throughout the year and not at the time of examinations alone. Further, it would also ensure the measurement and evaluation of both the cognitive and non-cognitive aspects of the pupils' growth besides providing proper 'Feedback' to their teachers in their work. The Vice-Chancellor also referred to the part that the Question Banks can play in the improvement of the quality of teaching as well as paper-setting.

Prof. Natarajan, delivering his keynote address, after referring to the guidelines given by the University Grants Commission regarding the minimum programme of examination reforms to be carried out by all Universities in the country spoke about the need for making our examinations both valid and reliable. He then discussed certain basic issues in examination reform such as the re-structuring of the syllabi in different subjects, frequency of examinations, importance of instructional objectives, design of question-papers, types of questions, provision of 'options', language of examinations, and appointment of paper-setters and examiners. He stressed the need not only for splitting the syllabus in every subject into convenient units but also for listing the specific learning outcomes that are expected in respect of each of them in terms of knowledge and abilities. Before a question paper is set, a blue print shall be prepared, giving the design of the question paper, the weightages given to the different units and the concerned instructional objectives.

He then brought out the defects of the 'overall choice' type of essay questions. He also emphasized the need for appointing as paper-setters and examiners only persons with recent teaching experience in the concerned subjects.

The faculties of Arts, Science, Indian Languages, Education, Engineering and Technology, Agriculture and Dental Science and Pharmacy met separately in groups and discussed the basic issues in examination reforms. At the General Session held later, the Deans presented the reports of their respective groups.

On the second day of the seminar, the problems of Internal assessment and Question banks were first taken up. While initiating a discussion on these two issues, Prof. Natarajan said that internal assessment is necessary for evaluating the pupils' abilities that are not tested by the external examinations. Apart from tests and assignments given periodically, different means of evaluation such as observation and rating scales, too, should be used. The six major components of such a system should be (1) Quiz (announced and unannounced) (2) Written tests (3) Assignments (4) Practical work (5) Personality traits and (6) Group discussions and Dissertations. The speaker added that whatever the proportion of marks allotted to internal assessment and external examination the marks under these two heads should not be combined into a single total but should be shown separately. Further, internal assessment should be kept open. As regards the establishment of Question Banks, Prof. Natarajan first showed how they would lead to better teaching on the part of teachers. They would become more conscious of their objectives of teaching if they are made to set suitable questions for the Bank each of which is based on a single instructional objective.

The speaker then referred to his own experiences in the building up of Question Banks in certain subjects and said that a fairly large number of questions would act as an effective deterrent against anyone trying to start an 'Answer Bank'. He said further that it would be well nigh impossible for any teacher also to teach only the answers to the questions included in the Bank and not teach the subject.

The different Faculties again met separately and discussed the different issues arising out of the introduction of a system of internal assessment as well as the establishment of Question Banks in the different Departments of study of the University. At the General Session that followed later, the report presented by the Dean of each Faculty was discussed.

In the afternoon, the problems of marking and grading in valuation were taken up for discussion. Prof. Natarajan dwelt at length on the relative advantages of grading over the system of marking. Though raw scores or marks given may be suitably 'scaled' and then graded, he preferred 'direct grading' of the answers given by the students. By grading groups of students into a smaller number of categories, each representing a range of marks, one can be more confident that the range within which a student is placed gives a more accurate indication of his standing than marks. The speaker then suggested that an Examination Reform Unit be started at the University so that all necessary steps may be taken for effecting desirable reforms in the present system of examination.

The different Faculties met separately once again and discussed the issues arising out of Prof. Natarajan's speech.

The concluding session of the seminar was presided over by the Vice-Chancellor, Prof. S.V. Chittibabu. The Deans first presented the Reports of their groups, highlighting their important recommendations. It was found that, by and large, there was unanimity or near unanimity on the part of all the faculties on many of the issues discussed :

(1) The need for restructuring the syllabi has been realised by all. Syllabus revised should include (a) content outlines in great detail to indicate breadth and depth of topics and sequence (b) a list of abilities/skills to be developed in students apart from other things.

The appointment of a task force or committee of teachers in each faculty for suggesting suitable syllabus revision was generally favoured, as a first step and the concerned Boards of Studies may take up this question later;

(2) It was generally felt that the University examinations should be held only once a year;

(3) There was no second opinion as regards the importance to be given to the formulation of instructional objectives in clear terms in the concerned syllabus;

(4) It was felt quite essential that the syllabus should also contain the blue print of the question paper to be set, giving relative weightages to be given to the different units and objectives;

(5) As regards the types of questions to be asked, there was no unanimity among the members of the different faculties on the desirability of including the multiple-choice question types. But all agreed that short-answer questions and essay-type questions, should both find a place in every question paper.

(6) It was recommended that no over-all options should be provided in any question paper;

(7) There was by and large, general agreement that the students may be given the option to take their examinations in their mother-tongue, if they so desired;

(8) It was decided that steps should be taken to train the teachers in the different faculties in the writing of objective type test items so that Question Banks may be started in all the Departments as early as possible;

(9) As regards internal assessment, it was felt that the University should prepare the ground for it and then think of introducing it. There was no difference of opinion as regards its desirability;

(10) All the faculty members strongly felt that an Examination Reform unit should be soon set up in the University and the U.G.C. addressed for financial help.

The Vice-Chancellor in his concluding address referred to the urgent need for effecting suitable reforms in the present examination system but at the same time cautioned against hasty steps being taken in respect of the introduction of internal assessment and grading in the light of our past experiences. □

UNIVERSITY NEWS

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New Postgraduate Programmes at IIT Bombay

The Indian Institute of Technology, Bombay, which celebrated its silver jubilee last year, is offering two challenging postgraduate programmes commencing from July 1984, for the benefit of brilliant and motivated students.

The first of these is M. Tech. Programme by Research. Based on the recommendations of the Review Committee on Postgraduate Education appointed by the Government of India, the duration of the M. Tech. programmes offered by all IITs has been reduced to three semesters with effect from the academic year, 1983-84. Out of these three semesters, two are spent on course work and only one on project work, resulting thereby in a substantial reduction in the time available for doing any reasonable quantum of research work at the postgraduate level. To overcome this shortcoming and help brilliant and motivated students having a flair for taking up a research oriented career in leading R&D organizations, IIT Bombay has formulated a new Three Semester M. Tech. Programme by Research in all the specializations and interdisciplinary areas of the Institute in which the regular M. Tech. programme is being currently offered. The distinguishing features of this new programme are :

(1) Admissions to this new programme are open only to those students admitted to the regular M. Tech. programme based on their performance in the Graduate Aptitude Test in Engineering (GATE). Hence, no separate applications will be entertained for the same

(2) After admission to the regular M. Tech. programme, an option for switching over to the M. Tech. programme by Research will be given to brilliant students, having a very high GATE score who also show an aptitude for research.

(3) The number of students admitted to the programme will not normally be more than 10% of the total number of students admitted to the regular M.Tech. programme.

(4) While students admitted to the regular M.Tech. programme will have to study five courses in the first semester and four to five courses in the second semester followed by project work during the third semester, those admitted to the new programme need study only five courses in the first semester followed by intensive research work during the subsequent two semesters.

(5) In order to ensure a high degree of standard for this programme, the academic performance criteria for the students are kept fairly high. This, in turn, is expected to produce research work of a quality acceptable to leading R&D organizations offering a challenging research oriented career.

(6) The students admitted to this programme will get the same scholarship of Rs. 600/- p.m. as those admitted to the regular one. However, since thesis work constitutes a major component of this programme, the title of the dissertation will be mentioned in the degree certificate.

The other programme being offered by the IIT is a Five Year Cooperative Integrated M. Tech. Programme in Chemical and Mechanical Engineering. The rapidly growing need for highly qualified technical manpower at the national level has brought to focus the widening gap between the aspirations of the fresh graduates seeking jobs of a challenging nature and the stipulation of the potential employers for employing them in responsible positions without going through a long and arduous incubation period in the form of intensive training. A strong and continuous collaborative interaction between the employers and the educational institutions can help effectively to bridge this gap. Such collaboration not only makes the educational programme relevant, rewarding, purposeful and cost-effective but also helps brilliant and motivated graduates to find their moorings in the professional environment of the employing organizations without any serious problem of maladjustment. With this objective in mind, a meaningful dialogue was initiated by IIT, Bombay with several leading industrial organizations resulting thereby in a unique, innovative Five Year Cooperative Integrated M. Tech. Programme which is being initially introduced in the areas of Chemical and Mechanical Engineering. The salient features of this programme are:

(1) The new integrated M. Tech. programme enables students to get their postgraduate degree directly within a period of 5 years.

(2) Admission to this programme is, however, restricted to only those students who have been admitted to the first year of the B.Tech. programme offered by IIT Bombay based on their performance in the Joint Entrance Examination conducted on an all-India basis. Selection for admission to this new integrated programme will be confined to only those students who have successfuly completed the first year of their B.Tech. programme in the Institute. The selection will be done strictly according to the merit list of the interested candidates based on their academic performance during the first year.

(3) The students admitted to this programme will be alternating their regular course work in the Institute with 3 to 4 stints of paid practical training during the intervening summer vacations. A number of courses on various aspects of industrial practices, finance and management to be offered jointly by the faculty of the Institute and experts from the industries constitute a significant component of the course curriculum.

(4) As part of the course requirements, each student will have to work intensively during the final year on a project involving a live problem which is of direct relevance to the sponsoring industry.

(5) The entire programme is formulated so as to give the students not only the required technological know-how of the highest order of excellence but also the capabilities for developing decision making skills expected of a managerial cadre.

(6) The programme will be exclusively supported by sponsorship from various industrial organizations who may also be potential employers for the students who successfully complete the same. Consequently, the students will receive a stipend of Rs. 400/- to Rs. 500/- per month for all the summer training session during the first three years. Scholarships of the order of Rs. 600/- to Rs. 800/- per month will be given for the entire duration of the last two years to introduce the important component of earning while learning thereby making the students self supporting.

National seminar on personality test

A national seminar on Personality Test was organised on 24th & 25th of March 1984 at Udaipur under the joint auspices of the Sukhadia University and the Rajasthan Public Service Commission. The Seminar was attended by the Chairmen of different State Public Service Commissions, Senior Professors of the University, Administrators and Heads of the Departments.

The Seminar was inaugurated by Shri B. P. Bery, Ex-Chief Justice of Rajasthan. During the two days of deliberations different aspects of the Personality Test were examined, keeping in view as to how interviews can be made more objective and what innovations can be introduced in terms of the composition of Selection Boards, items to be covered in the course of interviews. Opinions were expressed in favour of written test preceded by the Personality Test. It was however, stressed that the written test should be as far as possible objective. It was also observed that parametres of the Personality Test be got introduced for different categories of services. Some members pointed out that the structured interview should replace the unstructured interview. Majority of the members favoured written test, group discussions as a part of the Personality Test. It was also stressed that some research should be conducted in order to make the Personality Test more objective and effective.

Introduction of 10+2 system in schools under AMU

The University Grants Commission has accepted a proposal of the Aligarh Muslim University for the introduction of 10+2 system in the schools maintained by the University and has also agreed to provide financial assistance for this purpose. Such assistance will be on the condition that the curricula for 10+2 teaching and qualifications for the appointment of teachers will be in accordance with the norms prescribed by the Central Board of Secondary Education.

The Commission had appointed a committee to examine the proposal of the A.M.U which visited the University in July, 1983 and submitted a report. A.M.U. is at present running two schools for boys (one in the campus and the other in the city) and one for girls in the premises of the women's college. It is also maintaining a High school for the physically handicapped known as Ahmedi School for the blind. The University introduced the 10+2 system from the academic session 1983-84 and the first batch was making use of the facilities already available in the University for P.U.C. classes. The Commission's approval is for one centre for boys and another for girls. Arrangements for the teaching of blind students are recommended on the basis of integration in the boys school.

Aviation training centre for Avadh University

A flying training course is to be imparted at the Avadh University, Faizabad. Faizabad will be the fourth place in Uttar Pradesh where a civil aviation training centre will be established. The other three centres are located at Lucknow, Kanpur and Varanasi.

Shri Shripati Mishra, Chief Minister of Uttar Pradesh who laid the foundation-stone of the hangar of flying club, which is to be constructed at the old air strip, adjacent to the administrative building of the university said that it will give a boost to the sense of adventure among young men and women and would provide avenues for employment to those who wish to adopt it as a career. The government, he said would subsidise the fees for the training to enable the common men to take up flying.

Shri Pramod Tiwari, Minister of State for Information and Civil Aviation, Uttar Pradesh hoped that the training would start within three months.

Shri Yogendra Narain, Information Secretary, said that the Government is considering a proposal to start flying training in all the universities of Uttar Pradesh during the Seventh Plan.

Dr. A.P. Mehrotra, Vice-Chancellor, Avadh University, thanked the guests.

Osmania Varsity's programme on 'Management in Government'

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, inaugurating a two-week programme on "Management in Government" said recently that the progress and future of our country rested in the hands of civil servants who are responsible for running the Government at all levels. He said any job will give satisfaction and pleassure provided it is done with involvement, professionalism and commitment.

The programme is being conducted by the Department of Business Management, Osmania University and sponsored by the Department of Personnel and Administrative Reforms, Govt. of India. He said the civil servants should be service-oriented and not power-oriented. He asked them to develop a spirit of coordination for solving the problems and not to stand on their prestige or position.

Shri V. Sundaresan, Commissioner, Institute of Administration, Andhra Pradesh, who presided said managerial skills were very essential for civil servants as more and more public enterprises were being manned by civil servants.

Prof. A.S. Jagannadha Rao, Course Director, said the course content included management of human resources, management information systems, environment awareness, organisation communication and theories of leadership.

About 30 senior officials from Central Govt. and from various State Governments attended the programme.

New courses at MDU

The Maharshi Dayanand University at Rohtak has decided to institute a Certificate Course in Russian Language in the University College, Rohtak from the academic session 1984-85. A postgraduate Diploma Course in Translation (English-Hindi) has been started in the Department of Hindi. An MPhil course in Commerce has been introduced from the current session with an intake of 10 students.

A Department of Bio-Sciences will be established from the session 1984-85 and present Postgraduate Department of Zoology will be merged with this new department. To begin with the Department of Bio-Sciences will concentrate on MSc programmes.

With effect from the next academic year a new Department of Biology will be set up. Postgraduate classes now being run in the Govt. College, Narnaul in Geology will be transferred to the university campus. Narnaul is expected to stay as a field station.

Five-year law course at Bombay University

The Academic Council of the Bombay University recently approved the 10+2+5 pattern of legal education as recommended by the Bar Council of India. The new pattern is expected to come into effect from 1984-85. The 5-year course would comprise a two-year pre-law course and a 3-year LLB. course. The pre-law course will have five papers, each of 100 marks. In the first year the papers will be in General English, Political Science, Logic, History and Sociology. In the second year the papers would be: English and local language, Political Science, Economics, Logic & Judiciary system, Legislation and the legal profession in India.

Gurukula's 83rd Convocation

Amidst the chanting of the Vedic mantras and the whole atmosphere scintillating with the fragrance of the yajnas and a crowd of monks and ascetics amongst the intellectuals, the Senators and the Members of the Syndicate, other bodies of the Vishwavidyalaya and a large local and outside populace from Haryana, Punjab and Delhi, Gurukula Kangri Vishwavidyalaya held its 83rd annual convocation. One student was conferred the Ph.D. degree, 62 were awarded the M.A., 42 the M.Sc. and 32 were awarded the B.Sc. degrees. 17 students obtained the Alankar degree. The honorary Vidyamartend was awarded to Dr. Satyakam Vidyalankar and Swami Satya Prakash read out himself his convocation address as the Chief Guest. The celebrations continued from 10th to 15 April.

The Vice-Chancellor, Shri G.B.K. Hooja in his annual progress report and address made a mention of the various programmes and the progress made by the university during 1983-84. He said that the visiting committee from UGC was favourable to the programmes and policies of the Vishwavidyalaya to develop strongly its Vedic character and specialization in Indology and Vedic Studies, Ancient History, Yoga and allied *shastras*. He prophasied that the Vishwavidyalaya was poised to take a leap forward in this direction. Games, sports, library, Yoga, gymnasium, swimming, music, recitation of mantras, pure environment, academic development, opening of 30 centres for adult education, undertaking the Ganga Water Pollution Research (by special grants from the Union Ministry of Environment), Environment Seminar, Conference for American Studies and the like were the main features of the closing academic session. Visiting fellows and Professors had been appointed in various departments of the university. Suitable amendments, as per the advice of the Govt. of India, Ministry of Education, had been made in the Vishwavidyalya Constitution, and the university was at a take-off stage in all directions.

The Visitor, Dr. Satyavrat Siddhantalankar and Chancellor Shri Virendra, who is also the President of Arya Pratinidhi Sabha, Punjab and others while praising the Vishwavidyalaya for its glorious efforts to go forward emphasized the determination to develop the Vishwavidyalaya into a centre of advanced Vedic and Indological Studies in the near future.

Swami Satya Prakash, in his Convocation address, said that a Brahmachari is one who disseminates knowledge, and thus the students of his Vishwavidyalaya shall be lifelong *brahmacharis*. They shall preserve past knowledge and diffuse new knowledge in all fields, but more particularly the Vedas, Vedangas and Upvedas, the synthesis of which makes *science*. He hoped the products of this university shall be as illustrious as Gautam, Kapil, Kanath, Yask and Panini. He expressed a desire that the graduates of Gurukula Kangri shall be scholars of a very high order and shall work in various fields such as Linguistics, Ancient Indian History and Culture, Archaeology, and Vedic Studies. The Gurukula has a special responsibility and duty towards Arya Samaj. It should produce high class missionaries. The Aryan world must have a research journal of a very high order. For this purpose people should donate liberally. In the hour of crisis in education, institutions like Gurukula can show new light and give guidance. The Gurukulas should keep themselves free from the strife and competition, vices and evils of other universities. All our educational institutions of higher learning in Northern India are affected by some poisonous infection. This infection is proving to be a curse. This has done the greatest harm to the students, the youth of the country. The youth and students of country have lost control, have lost discipline, some others have fooled them for their own interests. Such influences did not leave the Gurukula unaffected.

Blessing the graduates of the Vishwavidyalaya, Chancellor Shri Virendra, President of Arya Pratinidhi Sabha, Punjab, stressed on the Vedic nature and character of Gurukula and assured people that the Vishwavidyalaya was determined to change itself into an institution of higher learning for Vedas and allied subjects, and with the establishment of the Dayanand Chair of Renaissance to study the history of India's glorious freedom struggle. He inspired the pass-outs to follow the great ideals of Swami Dayanand and Swami Shraddhanand, and to spread the knowledge of the Vedas to fulfil the goal of international unity, peace and brotherhood. He asked them to keep themselves above petty affairs, above dishonesty, greed and other vices, and to lead a life about which the Gurukula may be proud of, a life of purity, a life of decent conduct and good character. Ved Sammelan, Shiksha Sammelan, Vyayama Sammelan and the like were also the features of the fete.

Dr. Satyakam Vidyalankar was awarded Acharya Govardhan Shastri Prize for 1984 for the spread of and contribution to Vedic Literature and ideals. The award of Rs. 1,000/- was given by Sangarh Trust, Jaipur.

Appointment of foreigners in universities

According to information given to Lok Sabha by Mrs Sheila Kaul, Minister for Education, the Government is of the view that the universities should not appoint foreign nationals on a permanent basis.

Answering a question, she said that whenever foreigners were appointed every effort should be made to find suitable Indian personnel. The Central Universities are expected to obtain the Central Government's clearance before appointing a foreign national.

Symposium on modern trends in photochemistry

A six-day Symposium from 7th to 12th March 1984 sponsored by U.G.C. was organised at M.L.V. Govt. Postgraduate College, Bhilwara, Rajasthan, affiliated to Rajasthan University, under the directorship of Dr. M.R. Gelra, Principal of the College.

About 25 lecturers from various colleges of Rajasthan participated in the Symposium and six professors delivered lectures during the Symposium.

Prof. (Mrs) Rohtagi Mukharjee of Jadavpur University, Calcutta in her lectures pointed out the Photo induced reactions and Dynamics of Photochemical reactions.

Dr Amrish Shah of M.S. University, Baroda discussed the fascinating problems in Photochemistry.

Dr. S.C. Ameta of Udaipur University discussed the role of

CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/ Seminar/Symposium/ Workshop	Name of the Organising Department	Name of the Organising Secretary/Officer to be Contacted	Remarks
June 18-23, 1984	UGC sponsored Seminar on Modern British Fiction	Govt. Postgraduate College, Dharamsala (H.P.)	Dr. Atma Ram, Principal.	Forty five teachers of English are expected to participate
June 20-July 13, 1984	ICAR sponsored Summer Institute on Record advances on the production of post-harvest handling and processing vegetables and vegetable seeds.	Deptt. of Vegetable Crops, Land Scaping & Floriculture, PAU, Ludhiana.	Dr. K.S. Randhawa, Sr. Olericulturist & Head.	—
July 2-26, 1984	ICAR sponsored Summer Institute on Improvement & Development in the teaching of textiles & clothing.	College of Home Science, G.B. Pant Univ. of Agri. & Tech., Pantnagar.	Prof. (Mrs.) S.J. Shinde, Dean, Home Science.	—

Photochemistry in solving energy problems.

The stress was mainly on the conversion of solar energy to chemical energy to solve the energy crisis.

Committee to review moderation system at Jammu

The Vice-Chancellor of Jammu University has constituted a 5-member committee to review the system of moderation of question papers in operation in the University and to make suitable recommendations. The Controller or Examinations will act as Secretary to the Committee.

Rotation system implemented at GNDU

In pursuance of the recent decision of the Syndicate of the Guru Nanak Dev University regarding rotation of Headships, Vice-Chancellor, Dr. J.S. Grewal has made changes in the Headships of the Departments of Biology, Economics, English, Political Science, and Sociology. The changes took effect from April 1, 1984

Planning Atlas

The Karnatak University has successfully completed the preparation of a Planning Atlas for the four districts under its jurisdiction, viz., Dharwad, Belgaum, Bijapur and Karwar. The project began a year and a half ago with the Department of Geography as the nucleus. Some sixty maps have been prepared wherein are shown, applying the spatial approach, resources available and the present state of development in all spheres. This should go a long way in helping realistic future planning. The task, completed in a record time, has been a major step taken by the University in the utilization of its academic staff in applied knowledge.

Seminar on PR and Advertising in the industrial growth of AP at OU

Mr. Narender Luther, Principal Secretary, Medical and Health, said that the government policies and programmes should be effectively communicated to the people through Public Relations and Advertising. He said the development programmes for the benefit of the people could make the impact only when the people were informed.

Mr. Narender Luther was delivering the key-note address to a seminar on Role of Public Relations and Advertising in the Industrial Growth of A.P. organised by Osmania Journalism Association and Dept. of Communication and Journalism, Osmania University. He also said that public relations should be based on facts and research to have credibility. He cautioned that Public Relations was no substitute for real work.

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, in his inaugural address said, greater coverage should be given to positive programmes.

Prof. T. Navaneeth Rao, Rector of Osmania University, who presided said audio-visual aids were going to play a vital role in our education.

Emeritus Fellowship at Jammu

The University of Jammu has created an "Emeritus Fellowship" in the Department of Urdu. The fellowship has been awarded to Prof. Jagan Nath Azad with effect from 2nd January 1984 for a period of three years. Professor Jagan Nath would prepare and write an authentic biography of Dr. Mohammad Iqbal, the famous Urdu poet and also assist the Department of Urdu in teaching and guiding research, during the period of the fellowship.

The value of the Fellowship is Rs. 2500 per month and an amount of Rs. 2000 per annum has been attached with the fellowship as contingent grant for expenditure connected with the research work of the Fellow.

Telescopes for universities

Under a plan to encourage Indian scientists to conduct quality research in space science and related areas, the Advisory Commitee for Space Sciences will provide medium sized telescopes to the interested universities. For this purpose the Indian Institute of Astrophysics has completed the fabrication of a 16 inch telescope, it is reported

Orissa's gesture for best students in science

The Government of Orissa has recently decided to exempt the ten best science students of the State's three Universities from admission tests for studying in Government Medical or Engineering Colleges, it is reported

News from UGC

Fresh grant to Nagarjuna University

The University Grants Commission, on the recommendation of the Sixth Plan Visiting Committee, has approved the release of fresh grant amounting to Rs. 58.50 lakhs to Nagarjuna University, Nagarjunanagar for the following items :

Books and Journals—Rs. 7,72,500; Laboratory equipment—Rs. 17,65,000; Building—Rs. 19,50,000 and Staff—Rs. 13,62,000.

This grant, which is out of the total allocation of Rs. 75 lakhs for the Sixth Plan period, is in addition to Rs. 16.50 lakhs already approved for various items.

New UGC Members

In exercise of the powers conferred by the University Grants Commission Act, 1956 the Central Government has appointed Prof. S.C. Khare, Department of Mathematics, Allahabad University, Allahabad, and Mr. Justice M.H. Beg, Chairman, Minorities Commission as Members of the University Grants Commission for a term of three years vice Prof. C.N.R. Rao and Mr. Justice P.N. Singhal.

Hari Om Ashram Award for horticultural research and development

Dr. Jashbhai S. Patel Award for Horticultural Research and Development in India has been entrusted to Gujarat Agricultural University by the Hari Om Ashram, Surat for the purpose of giving out one Award for outstanding Research and Development work in Horticulture in India. The value of the award will be Rs. 5,000/- each year. The purpose of the award is to recognise and honour the research workers in the field of Horticulture for their notable original and fundamental research or for research leading to the economic prosperity of the farming community concerned with these crops. The terms and conditions of the award are :

(1) All Scientists and Horticulture workers engaged in research and development in the field of Horticulture i.e. fruit crops including melons and plantation crops only in India shall be eligible for the award.

(2) Candidates shall be judged on the basis of results of researches achieved/contribution made by them during the five years preceding the year of Award. In the case of the claim based on evolution of new varieties, the final trial should have been completed within three years only preceding the year of the Award.

Each competitor is requested to send 5 copies of detailed statement of work along with the relevent published or unpublished records as well as the attainments of the individual. The applications in prescribed proforma are to be sent to the Professor of Horticulture, Gujarat Agricultural University, Junagadh Campus, Junagad on or before 30th June, 1984.

The present award is for the year 1982-83.

We Congratulate . . .

1. **Prof. G.N. Reddy on his appointment as Vice-Chancellor of the Sri Venkateswara University.**
2. **Shri K. Ramakrishna Rao on his appointment as Vice-Chancellor of the Andhra University.**

News from Abroad

Compulsory education in Zimbabwe

The Zimbabwe Government is to make education compulsory for all children under 16 years old, according to Education Minister Dzingayi Mutumbuka. The Minister said recently that later in 1984, a legislation would be presented to Parliament making it an offence for parents to keep school-age children out of school.

The government is also considering paying fees where parents are genuinely unable to raise the necessary funds to send their children to secondary schools.

Since the independence of Zimbabwe in 1980, the number of children attending school had increased from 830,000 to between 2.5 million and three million this year.

Two other policies helped to make education more widely available. The serious shortage of teachers was alleviated when the Ministry of Education hired several hundred expatriate teachers, and double sessions were introduced in some existing schools, that is, a different set of teachers and pupils used a school in the morning and evening.

The Education Ministry says that some 79,000 pupils are expected to take the 'O' level examinations in 1984, compared to 25,000 in 1983. They point out that the system remains tied to the British model, and that the papers for senior examinations are set and marked in Britain.

The Government, sensitive to this charge, has taken some steps to "localise" the curriculum. For example, literature courses include the study of works by African writers rather than concentrate exclusively on standard English works.

It is expected that later this year the government will announce the introduction of new syllabuses designed to meet the requirements of Zimbabwean youth.

Sports News

'Pique' mascot for 1986 World Cup

Organisers of the 1986 World Cup Soccer have launched the competition's official mascot—a hot chile pepper man with a long black mustache and floppy sombrero.

The mascot, called "Pique" was recently presented in the Mexico City by Joseph Blatter, President of the FIFA, the international organisation of soccer federations and Herman Neuberger, head of the soccer cup organising committee.

The two soccer officials also showed the symbol for the 1986 competition that consists of the two world hemispheres in black and white joined by a soccer ball in red and white.

The hot chile pepper man—actually a 'Jalapeno' pepper of the type used in Mexican cooking—is dressed in soccer shorts and shirts and had a long black mustache above a big smile and wears a floppy sombrero.

Twenty-four national soccer teams will compete in the 1986 soccer cup that begins in Mexico on May 29, 1986.

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Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Dharam Bir. *Some results on elliptic curves with complex multiplication.* Pb U, Chandigarh. Prof. A.R. Rajwade.

Statistics

1. Baranwal, Pravasheel. *Statistical inference.* BHU, Varanasi. Dr. R. N. Pandey.

2. Uttam Singh. *Demography.* BHU, Varanasi. Dr. R.C. Yadav.

Physics

1. Bardoloi, Indira. *Determination of crystal and molecular structure of 2-methyl-4-nitro-azo benzene-2-sulphenyl cyanide.* Gauhati U. Dr. A.N. Talukdar.

2. Bardoloi, P. *A Study on the radio beacon scintillations observed at Gauhati.* Gauhati U. Dr. A.K. Borbora.

3. Barham Pal. *Electric field gradients in cubic dilute alloys.* Pb U, Chandigarh. Dr. S. Prakash and Dr. J. Singh.

4. Barkakaty, Dipak Kumar. *A study of a Quark model with charm and colour for exclusive processes.* Gauhati U. Dr. D.K. Choudhury.

5. Baruah, Pramila. *Students on the attenuation characteristics of H.F. radio wave and allied topics.* Gauhati U. Dr. A.K. Borbora.

6. Brijesh Kumar. *Precise optical techniques for alignment performance evaluation and calibration of optical sensors.* Devi Ahilya, Indore. Dr. R.S. Kasana and Dr. George Joseph.

7. Chakravarty, A. *Fission track ages of some co-existing minerals in granites of Assam-Meghalaya plateau.* Gauhati U. Dr. K.M. Pathak and Dr. P.K. Choudhury.

8. Mehta, Subhash Chandra. *X-ray spectroscopic studies of some light rare earth and their compounds.* Devi Ahilya, Indore. Dr. S.H. Gupta.

9. Rama Shanker. *Studies of vibrational spectra of some substituted benzenes.* BHU, Varanasi. Dr. O.N. Singh and Dr. I.N. Singh.

10. Ravindra Kumar. *Biorheological studies on human leprosy.* U Delhi. Dr. M.M. Bajaj.

11. Talukdar, K. *Studies on the atmospheric Cerenkov radiation from large cosmic ray showers.* Gauhati U. Dr. K.M. Pathak.

12. Upadhyaya, Hari Om. *Some problems of space physics: Tentative study of planetary atmosphere.* BHU, Varanasi. Dr. R.N. Singh.

13. Yadav, Prem Narayan Singh. *Conformation studies of oligosaccharides.* BHU, Varanasi. Dr. J.S. Yadav.

14. Yadava, Shivaji. *Hollow cathode arc and its application as a lasser* . BHU, Varanasi. Dr. O.N. Singh.

Chemistry

1. Chauhan, Prabha. *Chemical investigation of bioactive constituents of some Indian medicinal plants.* HS Gour, Sagar. Dr. V.K. Saxena.

2. Gulzar Singh. *Synthetic experiments in insect juvenile hormone mimics.* Pb U, Chandigarh. Prof. O.P. Vig. and Dr. O.L. Kad.

3. Jagbir Kaur. *Synthetic studies in thiadiazolo-quinazolines and some other fused heterocyclics.* Pb U, Chandigarh. Dr. H.K. Gakhar.

4. Kaila, Neelu. *Syntheses of physiologically active compounds.* U Delhi. Prof. V.K. Ahluwalia.

5. Mehta, Bhupinder. *Synthetic studies in heterocyclic compounds.* U Delhi. Prof. V.K. Ahluwalia.

6. Nayyar, Sudesh. *Coordination compounds of some transition metal derivatives of p-halobenzene sulphuric acids.* Pb U, Chandigarh. Dr Suniti Kumar.

7. Singh, Awadhesh Pratap. *Removal of pollutant from water.* BHU, Varanasi. Dr. V.N. Singh.

8. Srivastava, Urmila. *Removal of pollutant and waste water.* BHU, Varanasi. Dr. V.N. Singh and Dr. Guru Prasad.

9. Yadava, Kailash Prakash. *Removal of toxic pollutant from water.* BHU, Varanasi. Dr. V.N. Singh and Dr. Guru Prasad.

Earth Sciences

1. Arora, Param Jyoti. *Hydrochemical and hydrogeological studies of Faridkot and adjoining areas in Punjab State, India with special reference environmental problems.* Pb U, Chandigarh. Dr. K.P. Singh.

2. Bhuvan Parkash. *Contribution to the biostratigraphy of Karewa group (J&K) with special reference to microvertebrates and associated microfossils.* Pb U, Chandigarh. Prof. V.J. Gupta.

3. Bora, Arun Kumar. *Geology of the precambrian rocks of the Tyrssadweiloi area, Khasi Hills, Meghalaya.* Gauhati U. Dr. S. Rahman.

4. Bora, P.K. *Some aspects of geochemical and geomicrobiological studies related to petroleum exploration in Assam.* Gauhati U. Dr. H.D. Singh and Dr. D.N. Goswami.

5. Chaturvedi, Shree Niwas. *Neogene biostratigraphy.* BHU, Varanasi. Dr. M.S. Srinivasan.

6. Duarah, Ranju. *Investigation on the ultramafic rocks and seismic activity along the Indo-Burman suture zone: Its implication on geodynamic development of the region.* Gauhati U. Dr. C.C. Bhattacharjee.

7. Gupta, Anil Kumar. *Neogene micropalaeontology stratigraphy.* BHU, Varanasi. Dr. M.S. Srinivasan.

8. Habibur Rahman, M.D. *Sedimentology of the Shali formation exposed in the Gumma-Khaira-Tattapani region of the Simla Hills, North-western Himalaya.* Pb U, Chandigarh. Dr. R.S. Chaudhri.

9. Mohinder Kaur. *Studies on the biological properties of bacterial elastases.* Pb U, Chandigarh. Prof. K.G. Gupta.

10. Rai, Anand Prakash. *Economic geological investigations on the Malanjkhand copper deposit.* BHU, Varanasi. Prof. A.K. Bhattacharya.

11. Rajesh Anand. *A contribution to the geology and geochemistry of the ophiolites and associated sediments in Kargil and adjoining areas of Ladakh (J&K).* Pb U, Chandigarh. Prof. V.J. Gupta and Dr. Ravindra Kumar.

12. Ranvijai Singh. *Petrological and geochemical study of the scale of Korba coalfields, M.P.* BHU, Varanasi. Dr. R.M. Singh.

13. Uppal, Surinder. *Palaeontology and biostratigraphy of the paleozoic rocks in parts of Doda and Ladakh Districts, Jammu and Kashmir, India.* Pb U, Chandigarh. Prof. V.J. Gupta and Prof. Ashok Sahni.

14. Vallinayagam, O. *Petrology and geo-chemistry of the Lansdowne granites and associated crystalline rocks, Kumaon Himalaya, Uttar Pradesh.* Pb U, Chandigarh. Prof. A.K. Prasad.

15. Varma, Viraj. *Stratigraphy and depositional environment studies of the cretaceous rocks of Western Kachchh.* BHU, Varanasi. Dr. Jai Krishna.

Engineering & Technology

1. Anand Mohan. *Analysis and synthesis of digital wave rom generators with a special reference to instrumentation.* BHU, Varanasi. Prof. Raghu Nath.

2. Anil Kumar. *Studies on zirconia ceramics.* BHU, Varanasi. Dr. B.S. Tyagi and Dr. R.K. Sinha.

3. Ghosh, Gautam. *Physical metallurgy of titanium.* BHU, Varanasi. Dr. D.S. Sharma.

4. Gupta, Ghan Shyam. *Physico-chemical studies on micronutrients.* BHU, Varanasi. Dr. Prabhu Nath and Dr. Guru Prasad.

5. Jain, Pradip Kumar. *Some problems related to confinement of and interaction in electric beam for travelling wave tubes.* BHU, Varanasi. Prof. R.K. Jha.

6. Pandey, Prabhat. *Creep of rocks.* BHU, Varanasi. Dr. D.P. Singh.

7. Prasad, Lalita. *One dimensional disorder in crystals.* BHU, Varanasi. Dr. D. Pandey and Dr. S. Lele.

8. Rajsekharan Nair, K.V. *Role of dezincification in stress corrosion cracking of brasses.* BHU, Varanasi. Dr. T.K.G. Namboodhiri and Dr. R.S. Chaudhary.

9. Singh, Arun Kumar. *Fluid flow through porous media.* BHU, Varanasi. Dr. J.G. Singh.

10. Singh, Awadesh Pratap. *Kinetics of coal liquefaction.* BHU, Varanasi. Dr. P.C. Singh and Dr. V.K. Singh.

11. Sinha, Mahesh Prasad. *A study on blow-wave propagation through a helix.* BHU, Varanasi. Prof. R.K. Jha and Dr. B.N. Basu.

12. Sinha, Surendra Kumar. *Development of alloy steel.* BHU, Varanasi. Prof. D.S. Sharma.

13. Yadav, Kailash Prakash. *Studies on pollution in ceramic industry.* BHU, Varanasi. Dr. B.S. Tyagi and Dr. V.M. Singh.

BIOLOGICAL SCIENCES

Anthropology

1. Das, H.L. *Age changes in some somatometric characters of the Hajongs of Meghalaya.* Gauhati U. Dr. (Mrs.) P.B. Das.

2. Jain, Rimam Kumar. *Effects of nutrition, environmental factors (altitude and climate) and diseases on the trends of growth among Dorla tribes of Baster.* HS Gour, Sagar. Dr. H.N. Bhatteria.

3. Pathmanathan, Gayathiri. *Skeletal maturation and physical growth of Jat children from Haryana (India).* Pb U, Chandigarh. Dr. S. Prakash.

Biochemistry

1. Dutta, A.M. *Study of the chemical nature and biochemical effects of Thevetia nerifolia Juss.* Gauhati U. Dr. P. Goswami.

2. Goswami, M. *Study on the effect of insulin on free amino acids of blood with special reference to gluconeogenesis.* Gauhati U. Dr. P. Goswami.

3. Goswami, Mamata. *Study of the effect of methylcholanthrene on some of the enzymes of digestive tract.* Gauhati U. Dr. P. Goswami.

Microbiology

1. Kotia, Ameta. *Studies on the effect of resistance to heavy metals on biological properties of and production of extracellular substances by Staphylococcous aureus and Pseudomonas aeruginosa.* Pb U, Chandigarh. Prof. K.G. Gupta.

Marine Biology

1. Patnaik, Prabhat Nalini. *Biology and culture of prawns, Penaeus monodon and Penaeus indicus and their resources in Orissa coast.* Sambalpur U Dr. M.C. Dash.

Botany

1. Baruah, Mukul. *Pathological investigations concerning decay to Shorea robusta Geartn. F.* Gauhati U. Dr. D.N. Baishya.

2. Bhatia, Neelam. *Exploration and evaluation of energy yielding tree species for biomass potential and regeneration.* Pb U, Chandigarh, Dr. (Mrs.) Promila Sethi.

3. Malik, Govind Krishan. *Cytological studies (karyology) on the herbaceous legumes Vicia and Lathyrus.* Pb U, Chandigarh. Prof. S.C. Verma.

4. Subramanyam, B.C. Surya. *Systematics and cytotaxonomy of Indian charophytes.* BHU, Varanasi. Prof. T. Sarma.

Zoology

1. Das, Krutibas. *The effect of heavy metal pollutions on some fresh water fishes of Sambalpur, Orissa.* Sambalpur U. Dr. Balaram Nanda.

2. Duara, H. *The food of major Indian carps from the Brahmaputra drainages of Assam.* Gauhati U. Dr. S.C. Dey.

3. Dutta, K. *Effect of benzophenone on the haematological picture of Cavlia porcellus and the possibility of revival with selected vitamin treatment.* Gauhati U. Dr. (Mrs.) M. Das.

4. Madhu Bala. *Sterilization of Callosobruceus chinensis Linnaeus by gamma-radiations for use in the sterile insect release method for pest suppression.* Pb U, Chandigarh. Dr. H.R. Pajni.

5. Nath, P. *Systematics, distribution and ecology of Ichthyofauna of Arunachal Pradesh with particular reference to the Limno-biology of Itanagar Lake.* Gauhati U. Dr. S.C. Dey.

6. Rath, Chandan Kumar. *Effect of paper mill pollutants and some heavy metals on some fresh water fishes.* Sambalpur U. Dr. M.C. Dash.

7. Sengupta, S. *Effects of benzene hexachloride on the cytophysiology of the liver of Heteropneustes fossilis Bloch.* Gauhati U. Dr. (Mrs.) M. Das.

8. Sharma, Madhurima. *Characterization of birds using lectins and isozymes as parameters.* Pb U, Chandigarh. Prof. G.P. Sharma and Dr. R.C. Sobti.

Medical Sciences

1. Saxena, Ajit Kumar. *Chromosomal and some biochecal aspects of sterility and building experimental model for its study.* BHU Varanasi. Dr. R. Banesai and Dr. S. Singh.

2. Srivastava, Vinod Kumar. *Biochemical studies and immune response to Entamoeba histolytica infestation with special reference to its pathogenicity.* BHU Varanasi. Dr. A.K. Jain.

Agriculture

1. Amanul Haque. *Studies on the effects of plant growth regulators on the growth and yield of potato tuber.* Gauhati U. Dr. C.M. Sarma.

2. Chakravartee, J. *Influence of time of pruning, shifting, interval of plucking and maintenance of leaves on total yield and crop distribution of tea.* Gauhati U. Dr. P.P. Wamanan.

3. Chintola, V.V. Sagar. *Phosphorus transformation and mobilization under paddy cultivation.* BHU Varanasi. Dr. M.L. Gupta.

4. Dina Nath. *Studies of acetyl cholinesterase in insect.* BHU, Varanasi. Dr. H.N. Singh.

5. Lepcha, Lemsing Gewloog. *Nitrogen use efficiency in rice.* BHU, Varanasi. Dr. Kalyan Singh.

6. Pandey, Dherndra Kumar. *Studies on crop residue/organic waste management and soil improvement.* BHU, Varanasi. Dr. S.C. Tiwari.

7. Sahay, Narendra Kumar. *Studies on fertility status of soil of Eastern U.P. in relation to high yielding varieties.* BHU, Varanasi. Dr. B. Singh.

8. Singh, Jai Deep. *Weed control in rice based cropping system.* BHU, Varanasi. Prof. Mahatim Singh.

9. Singh, Pyare Lal. *Effect of mulching on the growth and yield of rainfed wheat.* BHU, Varanasi. Dr. N.M. Misra.

10. Tarkeshwar, Singh. *Studies on fertility management and micro climatic variations in rainfed inter-cropping system.* BHU, Varanasi. Dr. Kalyan Singh.

11. Vijai Singh. *Agronomy of direct sown rice.* BHU, Varanasi. Prof. M. Singh.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Abdus Samad, S.K. *On some problems of magnetofluid dynamics.* U Burdwan.

2. Basu, Tapaskumar. *Model studies of the gluco-regulatory functions in human systems.* U Calcutta.

3. Bhamini, M.P. *The role of semi-open sets in general topology.* U Delhi.

4. Jain, Prakash Chand. *Generalizations of certain topological concepts.* HS Gour, Sagar.

5. Jayalakshmi, A. *Some studies in algebraic semigroups and associated structures.* Bangalore U.

6. Jayaram, Chillumuntala. *Characterization of boolean lattices and quasi-regular rings.* U Madras.

7. Kanoria, Mridula. *Inclusion problems in elasticity.* U Calcutta.

8. Man Mohan Kaur. *Symmetry and the shannon entropy.* U Delhi.

9. Maskey, Santosh Man. *A study of Schauder decompositions of banach spaces.* U Delhi.

10. Muttepawar, Subhash. *Sheaf theoretic cohomological dimension and tautness.* U Jammu.

11. Natarajan, R. *Studies in lattice theory with special reference to complete moduler lattices, supermodular semilattices and some problems of G. Birkhoff and G. Gratzer.* U Madras.

12. Parida, Dayanidhi. *Flow of an electrically conducting fluid in the presence of a magnetic field.* Utkal U, Bhubaneswar.

13. Saradha, K. *Approximation of certain transcedental numbers.* U Madras.

14. Sarkar, Sabita. *Contribution of Indian mathematicians to astronomy and calculus.* LNMU, Darbhanga.

15. Singh, Lal Sahab. *A study of certain properties of special functions.* BHU, Varanasi.

16. Singh, Prem Shanker. *A study on a modified H-functions of two variables and its applications.* BHU, Varanasi.

17. Sunil Kumar. *Stochastic behaviour of some reliability models in operations research.* Meerut U.

18. Yadav, Kishori Lal. *Dusty flows and their stability.* Meerut U.

Statistics

1. Bagawandas, M. *Statistical analysis of iconometric measurements of South Indian sculptures.* U Madras.

2. Chandrasekaran, N. *Machine recognition of the modern Tamil script.* U Madras.

3. Chandrasekaran, R. *Computer recognition of certain ancient and modern Indian scripts.* U Madras.

4. Govindaraju, S. *Computer analysis of the measurements of Pallava sculptures of South India.* U Madras.

5. Soundarapandian, V.S. *Some contributions to the theory of construction and analysis of m-Ary designs.* U Madras.

6. Vijayathilakan, J.P. *Studies on lot acceptance procedures.* U Madras.

Physics

1. Ajabrao, Vilas. *Ultrasonic studies in some binary liquid mixtures.* Nagpur U.

2. Arora, Ravinder Kumar. *Equation of state for polymer crystals glasses and melts.* U Delhi.

3. Bhargava, V.T. Ananthasayana. *Studies on the quantum anharmonic oscillators in 3 dimensions.* U Madras.

4. Bhattacharjee, Sushanta Kumar. *A critical study ou disintegration of emulsion nuclei at varying high-energy collisions.* Gauhati U.

5. Chinnusamy, M. *Positron annihilation study of point defects in KCI single crystal.* U Madras.

6. Daskhan, Mahadeb. *Scattering of electrons and photons by one and two electron atoms and ions.* U Calcutta.

7. Goyal, Pramod Kumar. *The study of electric transport properties of group II-VI and III-V semiconductors using thermomagneto effects.* Meerut U.

8. John, K.T. *Peripheral organisation of the hand with respect to manipulative movements: A biophysical study in Bonnet Monkeys.* U Madras.

9. Kansal, Kanti Prasad. *Spectral studies of some-N-heterocyclic and benezene derivatives and in molecular vibrations.* Meerut U.

10. Krishnan. S. *Studies on rhythmic precipitation of calcium and copper carbonates in Agar-Agar gel.* U Madras.

11. Lalitha, V. *Studies on biological molecules.* U Madras.

12. Maiti, Satyaranjan. *Problems of cosmology.* U Calcutta.

13. Nagalingam, S. *Theoretical and experimental studies on crystal nucleation and growth.* U Madras.

14. Pani, Nalini. *Path integral formulation of the density-matrix for a system of particles in arbitrary potentials.* U Madras.

15. Paradkar, Surya Kant. *Electrical transport properties of n-type and p-type doped lead telluride thin films.* U Delhi.

16. Radhakrishnan, R. *Investigation of structural basis of biomolecular function through computer simulation and computer graphics.* U Madras.

17. Rai, Awadhesh Kumar. *Spectroscopic studies of diatomic mercury halides.* BHU, Varanasi.

18. Ramamurthi, K. *Studies on molecular constants.* U Madras.

19. Shashi Kumar. *Bounds for the growth rate of a perturbation in some hydrodynamic and hydromagnetic stability problems.* HPU, Simla.

20. Singhal, Rajendra Prasad. *Dielectric and other structure-polyacrylonitrile and its copolymers.* Meerut U.

21. Sivakumar, P. *Studies on molecular force fields of polyatomic molecules using pseudo exact HL FS method.* U Madras.

22. Sridhar, V.N. *Studies in muon capture by complex nuclei.* U Madras.

23. Subramanian, C. *Investigations of the force field by high and low frequency separation technique and isotani method.* U Madras.

24. Subramanian, K. *Crystal structure of organic compounds.* U Madras.

25. Sundar, C.S. *Positron annihilation studies of defects in metals and metallic glasses.* U Madras.

26. Suryanarayana, N.S. *Propagation of acoustic waves in a weakly ionised plasma.* RSU, Raipur.

27. Vasudevan, S. *Kinetics of non-spherical nuclei and studies on nucleation, growth and characterisation of ADP crystals.* U Madras.

Chemistry

1. Abdul Gani, D. *Studies on metal complexes with compartmental ligands.* U Madras.

2. Abrol, Sham La. *Studies in addition polymerization.* U Jammu.

3. Aley, M.A. *Kinetics of catalysed hydrolysis of hydroxamic acids.* RSU Raipur.

4. Anandan, S. *Kinetics of oxidation of benzaldehydes and amino acids with potassium bromate.* U Madras.

5. Ashtaputre, Suresh Narayanarao. *A study of metal complexes.* Kar U, Dharwad.

6. Bedekar, Iravati. *Chemistry of tetra-O-acetyl-L-D-glucopyranosyl bromide: synthesis of certain acetylated thioglucosides.* Nagpur U.

7. Chakraborty, Bhaskar Bijoy. *Studies on the corrosion inhibition of iron in neutral solutions.* U Delhi.

8. Chakravortty, Vivekananda. *Solvent extraction of protactinium with sulfoxides.* Utkal U, Bhubaneswar.

9. Chaudhari, Mahendra kumar Ranjitsinh. *Studies of metal chelates of substituted salicylic acid, salicyladehyde and orthohydroxy acetophenone.* SPU, Vallabh Vidyanagar.

10. Chhote Lal. *Stereochemistry of the coordination compounds of metal (II) salts with some nitrogen and oxygen donors.* BHU, Varanasi.

11. Das, Binayak. *Studies on constituents of Solanum species.* U Calcutta.

12. Dhal, Akhaya Kumar. *Vinyl polymerization initiated by non-metal ions.* Utkal U, Bhubaneswar.

13. Dharma Rao, S. Chand. *Studies in oxidations: (I) Catalysis and cooxidation in chromic acid oxidations; and (II) Structure and reactivity in oxidations by peroxomonophosphoric acid.* Berhampur U.

14. Durairaj, B. *Investigations on the synthesis, Characterisation and properties of macromolecules and high polymers.* U Madras.

15. Ekambareswara Rao, Kandimalla. *New spectrophotometric and fluorimetric methods for the determinations of the phenols.* Andhra U, Waltair.

16. Gandhi, Pinki Bala. *Studies in photodynamic effects on some organic compounds of biological importance.* Vikram U, Ujjain.

17. Geetha, B. *Base catalysed and related rearrangements.* U Madras.

18. Ghosh, Parthasarathi. *Studies on Indian medicinal plants.* U Burdwan.

19. Gupta, Rama. *Studies in organotin (IV) derivatives of N-protected-amine acids, peptides and related compounds.* GNDU, Amritsar.

20. Jain, Anjula. *Synthetic studies in benzopyrones and chromenes and synthesis of N-substituted-O-acetyl-N-aryl-thiosemi-carbazides derived from 7-hydroxy benzopyrones as potential fungicides and bactericides.* U Delhi.

21. Jayachandran, T. *Studies on the synthesis of heterocycles.* U Madras.

22. Jayaraman, S. *Studies on the possible helical conformations of nucleic acids using the concept of Dinucleotide repeart.* U Madras.

23. Joseph, Joseph Anne Shree C.C. *Preparation and physico-chemical studies of graft copolymers of gelatin.* U Madras.

24. Kamala, R. *Physico-chemical studies on sulphonyl phenols.* U Madras.

25. Kanniah, N. *Revert and direct Liesegang phenomenon.* Anna U, Guindy.

26. Khosla, Sushma. *Some aspects of transport and volumetric properties of concentrated water-urea-alkali metal nitrate systems.* U Delhi.

27. Kumaraswamy, M.D.K. *Studies on enzyme immobilization onto graft copolymers.* U Madras.

28. Madhusudanamma, Wuppalamorthy. *Studies on the chemistry of vegetable tannins and synthetic tannins.* U Madras.

29. Mandal, Sanat Kumar. *Chemistry of binuclear copper (II) complexes.* U Calcutta.

30. Misra, Prasanna Kumar. *Synthesis and applications of amines and heterocyclic compounds.* Utkal U, Bhubaneswar.

31. Mohammad Mujtaba, Ali. *Physico-chemical investigations of calcium aluminate cement.* BHU, Varanasi.

32. Mohan, D. *Studies on graft copolymerization of acrylate monomers onto casein.* U Madras.

33. Muthuswany, S. *Studies on some metal dithiocarbamate complexes and their base adducts.* U Madras.

34. Padma, V. *Studies on metal complexes of macrocyclic ligands.* U Madras.

35. Periakali, *P. The geochemistry of ultrabasic suite of rocks of Nagaramalai, Salem District, Tamil Nadu.* U Madras.

36. Prabhakaran, G. *Catalytic cracking of gas oil over poped inorganic copolymer.* U Madras.

37. Pujari, Surendra Kumar. *Studies on metal complexes of Co (II), Cu (II) Cd, (II) and Hg (II).* Sambalpur U.

38. Raghavan, P.S. *Studies on micellar influenced chemical reactions.* U Madras.

39. Raghunath, K. *Chemically modified natural polymers as biomaterials.* U Madras.

40. Rajakumar, P. *Cycloaddition reactions involving reactive intermediates.* U Madras.

41. Rajeswari, Moganty Raja. *Studies on partial molar volumes of some alpha-amino acids and their mixtures and spectroscopic studies on tryptophans in concanavalin-A.* U Delhi.

42. Ramesh Chandra. *Synthetic studies on some sulphur compounds.* BHU, Varanasi.

43. Sarathy, R. *Chemical study of some Indian medicinal plants.* H.S. Gour, Sagar.

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45. Sharma, Rajeev. *Analytical determination for some catecholamines.* Vikram U, Ujjain.

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3. Meer Mohammed Ali. *Use of water balance concepts in the water resources development of the Godavari river basin.* Andhra U, Waltair.

4. Mohana Rao, Nandamudi Jagan. *Rainfall studies in the Southwest monsoon season.* Andhra. U, Waltair.

5. Munshi, Ashok Kumar. *Petrology of the igneous complex around Kargil Ladakh District, J and K State.* U Jammu.

6. Patra, Bhagabat Prasad. *Contribution to jurassic-cretaceous palaeobotany of India.* Utkal U, Bhubaneswar.

7. Prasad, Gurram Venkata Krishna. *Economic geology of ballclay deposits in upper Gondwanas of West Godavari.* Andhra U, Waltair.

8. Sri, Rama Krishna Yezzu. *Studies on the role of microcrop shelter belts in the arid region of India.* Andhra U Waltair.

Engineering

1. Chakrabarty, Chanchal. *Studies on some aspects of Kinetics and mechanism of corrosion and inhibition of aluminium alloys in nitric acid.* BHU, Varanasi.

2. Hebbar, K. Ramakanth. *Texture-dependent stress corrosion failure of commercial zircaloy-2 sheets in methanol halogen medium.* Mangalore U.

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2. Asstt. Prof. : 1 Post (Temp.—but likely to be made permanent).
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A. Patton
REGISTRAR

UNIVERSITY OF CALCUTTA
SENATE HOUSE, CALCUTTA-700073
Dated : 4th May, 1984

Applications are invited for the posts of University Professors/Readers/Lecturers in the U.G.C. Scales of pay (i.e. Professors Rs. 1500-2500, Readers Rs. 1200-1900, Lecturers Rs. 700-1600) plus allowances as may be admissible from time to time under the rules of the University for the different departments of the University. Emoluments at the minimum of the scale respectively total Rs. 2561.70 np., Rs. 2216.70 np. and Rs. 1455.70 np. (including all admissible allowances at the existing rates). For selected candidates already enjoying U.G.C. or similar scale of pay in a reputed institution of higher studies/Research in India, basic pay will ordinarily be protected, Higher initial pay may be given by the Syndicate to an incumbent in consideration of excellence of academic record and experience on the recommendation of the Selection Committee and the Finance Committee. The University offers Triple retirement benefits, i.e. Contributory P.F., Gratuity and Pension as per University rules. Appointments will be made on merit without discrimination on grounds of race, religion, language or sex; however, working knowledge of written and spoken Bengali is desirable.

II. **Essential qualifications and experience.**

(a) Uniformly good academic career i.e. at least 50% marks in examinations equivalent to the Master's and Bachelor's degree with honours of this University, as well as at the Secondary/Higher Secondary stages;

(b) Evidence of continuing research interest as manifest in published work in reputed research journals or Doctorate degree of a recognised University;

(c) In the cases of posts under the Faculties of Law, Medicine and Technology candidates must possess the essential qualifications and/or experience required for the posts as laid down by the respective professional bodies viz. the Bar Council of India, the Medical Council of India and the All Indian Council for Technical Education, as the case may be, where applicable.

(d) Teaching experience at the Post-Graduate level or relevant industrial/professional experience—(i) for Professors—15 years (evidence of successfully guiding research students for P.G. degree is essential) (ii) for Readers—10 years and (iii) for Lecturers--5 years. (Degrees and Research/Teaching experience shall be in the subject concerned or in an inter-disciplinary field considered relevant by the Selection Committee).

Relaxation : The Syndicate may relax, if so recommended by the Selection Committee on specific grounds, the stipulations regarding qualifications and the number of years of relevant experience in case of candidates possessing exceptionally good academic records and outstanding capabilities. The Selection Committee may also consider suitable qualified persons who may not formally apply.

III. Departments and the corresponding vacancies are as follows:—

A. Humanities and Social Sciences

Name of the Department	*Vacancy*	
1. Department of Philosophy	Reader	1 post
	Lecturer	1 post
2. Department of Commerce	Professor	2 posts
3. Department of Library Science	Lecturer	1 post
4. Department of Economics	Lecturer	2 posts
5. Department of Comparative Philology	Reader	1 post
	Lecturer	2 posts
6. Department of Political Science	Professor	1 post
	Reader	1 post
	Lecturer	3 posts
7. Department of Tamil	Professor	1 post
	Lecturer	2 posts
8. Department of Education	Reader	1 post
	Lecturer	4 posts
9. Department of Law	Reader	1 post
	Lecturer	1 post
10. Department of Urdu	Professor	1 post
	Lecturer	1 post
11. Centre for South and South East Asian Studies	Professor	1 post
	Reader	1 post
	Lecturer	1 post
12. Department of A.I.H.C.	Reader	2 posts
	Lecturer	1 post
13. Department of Sanskrit	Reader	2 posts

IV. **Additional information, desirable qualifications, specialisations and experience, as applicable.**

Department of Philosophy :

Posts temporary likely to be made permanent.

Department of Commerce:

One post designated as I.F.C.I. Professor of Industrial Finance—For 5 years at present.

Department of Library Science:

Lecturer : Specialisation in Bibliography (Historical, critical and systematics, Book Selection, Academic Library System).

Department of Economics:

Lecturers : Specialisation in quantitative Economics/Economic Development/Economic Policy.

Department of Comparative Philology:

For Reader: Teaching Experience preferably in Tibto Burman or Austro-Asiatic Linguistics and Specialisation in the (1) Field Methods (2) Generative Phonology, (3) Semantics.

For Lecturers: Contrastive Linguistics or Socio Linguistics for one post and Methodology of Language Teaching and Transformational syntax for the other post.

Department of Political Science:

Posts of Professor and Reader temporary, likely to be made permanent.

Department of Tamil:

Professor : Designated as Bharati Professor.

Lecturers : Specialisation in Linguistics and/or Comparative Literature.

Department of Urdu:

Professor : Designated as Iqbal Professor.

Lecturer : Specialisation in Modern

Urdu Poetry after 1935.

Centre for South & South East Asian Studies:

For all posts: Research work of high order on Bangladesh/Thailand/Burma with knowledge of Thai or Burmese Language.

Department of A.I.H.C.:

Lecturer : Religious History (Group III)

SCIENCE & TECHNOLOGY

Departments and Corresponding Vacancies are as follows:

1. Chemical Engineering	Professor	1 post
	Reader	1 post
	Lecturer	2 posts
2. Food & Nutrition (Home Sc.)	Lecturer	4 posts
3. Bio-Chemistry	Lecturer	1 post
4. Computer Science	Professor	1 post
	Reader	3 posts
	Lecturer	2 posts
5. Psychology	Lecturer	3 posts
6. Radio Physics & Electronics	Reader	1 post
	Lecturer	1 post
7. Geology	Reader	1 post
	Lecturer	1 post
8. Physiology	Lecturer	1 post
9. Chemistry	Professor	1 post
	Lecturer	1 post
10. Zoology	Reader	1 post
	Lecturer	1 post
11. Geography	Professor	1 post
12. Agriculture	Reader	1 post
13 Applied Physics	Professor	1 post
	Reader	1 post
	Lecturer	1 post
14. Applied Psychology	Professor	1 post
	Lecturer	1 post
15. Applied Mathematics	Professor	2 posts
	Reader	1 post
16. Plastic & Rubber Technology	Professor	1 post
	Reader	3 posts
	Lecturer	4 posts
17. Pure Mathematics	Lecturer	2 posts
18. Anthropology	Reader	4 posts
	Lecturer	1 post
19. Statistics	Reader	1 post
	Lecturer	2 posts
20. Marine Science	Professor	2 posts
	Reader	3 posts
	Lecturer	4 posts
21. Sir R.B. Ghose Professor of Applied Chemistry		1 post

Additional information, desirable qualifications, specialisations and experience as applicable.

Chemical Engineering

Professor : Outstanding Research work in any field of Chemical Engineering.

Reader : Specialisation in any one of the following:

(a) Computer Aided Design
(b) Chemical Reaction Engineering
(c) Process Equipment Design
(d) Food & Bio-Chemical Engineering
(e) Transfer Process
(f) Process Simulation & Optimisation
(g) Instrumentation

Lecturer : Specialisation in any of the following:

(a) Process Simulation & Optimisation
(b) Process Equipment Design
(c) Computer Aided Design

Food & Nutrition

Lecturers : In (a) Nutrition, (b) Bio-Chemistry, (c) Physiology, (d) Chemistry.

For (a) : Master Degree in Food & Nutrition or Physiology with Ph.D.

Desirable : Special paper in Nutrition or Bio-Chemistry or allied subject.

For (b) : Master Degree in Bio-Chemistry with Ph.D.

Desirable : Special paper in Enzymology or Microbiology.

For (c) : Master degree in Physiology with Ph.D.

Desirable : Special paper in Bio-Chemistry or Nutrition.

For (d) : Master Degree in Chemistry (Organic) with Ph.D.

Desirable : Special paper in Organic Chemistry.

Bio-Chemistry

Lecturer : Nutrition & Toxicology Neurobiochemistry/Molecular Biology/Microbial Bio-Chemistry.

Computer Science

For all posts specialisation in any of the following:

1. Advanced Computer Architecture & Organisation
2. Microprocessor based system Design
3. Systems programming
4. Data base Management System
5. Pattern Recognisation & Artificial Intelligence
6. Computer Graphics & Image Processing
7. Formal Language & Automate theory

Psychology

Lecturer : Abnormal Psychology & Behavioral Genetics Developmental & Social Psychologies & Experimental Psychology

Radio Physics & Electronics

For all posts specialisation in any of the following:

1. Space Science
2. Solid State Electronics
3. Microwave Electronics
4. Plasma & Quantum Electronics
5. Bio-Electronics
6. Control Engineering
7. Microprocessors & Computer Hardware
8. Communication Engineering

Geology

For Reader : Sedimentology—Stratigraphy/Coal Geology/Geomorphology/Photogeology / Geochemistry / Mineralogy.

For Lecturer : Sedimentology—Stratigraphy / Mineralogy / Structural Geology/Palaeontology.

Physiology

For Lecturer : Bio-Physics & Electrophysiology along with work and Sport Physiology.

Chemistry

Professor : Designated as Kumar Guruprosad Singh Professor of Chemistry.

Lecturer : Aptitude of Research in any branch of Physical Chemistry.

Zoology

For Reader : Environmental Biology/Developmental Biology/Reproductive Biology/Biochemistry and Physiology/Ecology.

Geography

Professor : Various branches of Physical Geography.

Agriculture

Reader : Good Research experience on problems of relevance in Horticulture.

Applied Physics

Professor : Designated as Sir R.B. Ghosh Professor—Electrical Measurement & Instrumentation or Electrical Machines & Power system.

Reader : Electrical Measurement & Instrumentation or Electrical machines & Power system.

Lecturer : Electrical Machine, Control system, Power Electronics.

Applied Psychology

Professor (Any 2 of the following):

(a) Clinical Psychology
(b) Applied Social Psychology (Community Psychology)
(c) Organisational Psychology
(d) Environmental Psychology
(e) Psychodiagnostics & Therapy.

Lecturer : Any approved fields of Applied Psychology.

Applied Mathematics

For Professors : Posts designated as Sir R.B. Ghosh Professor and as S.N. Bose Professor of Theoretical Physics.

Specialisation in Theoretical Physics including quantum-Mechanics, Relativity, particle Physics, Plasma Physics & Statistical Physics:

Plastic & Rubber Technology

For Professor : M.Sc.(Tech)/M.Tech. in Applied Chemistry/Chemical Engineering or Chemical Technology with specialisation in Polymer/Plastics/Rubber Technology or M.Tech in Plastics & Rubber Technology.

For Reader

(a) Unit operation in High Polymer & Resin Technology.
(b) Polymer Engineering.
(c) Material Sciene (Polymer Material)/Polymer Melts Pastes and Solutions.

For Lecturer

1. Polymer & Resin Synthesis (Unit Process)
2. Plastics Compounding/Blending & Processing Technology.
3. Rubber Compounding/Blending & Processing Technology.
4. Polymer product characterisation (Physical/Organic/Analytical Polymer Chemistry).

Anthropology

For Reader :

1. Social/Cultural Anthropology (including early & Contemporary)
2. Physical Anthropology Human Genetics/Palaeoanthropology.

For Lecturer:

Physical/Applied Anthropology Physical Anthropology & Human Genetics/Social & Cultural Anthropology/Prehistory & Paleaoanthropology.

Statistics

For Reader : Sample Survey and Multivariate Analysis.

For Lecturer :

1. Operations Research & Multivariate Analysis.
2. Non parametric Methods and Measures theory.

Marine Science

Professor (Two) :

Specialisation

(a) M.Sc. in Zoology and a doctoral degree with research experience in the field of marine, estuarine and mangrove ecosystem.
(b) M.Sc. in Marine/Marine Botany and a doctoral degree in the subject.

Research experience with publication evidence in the field of marine biology is desirable.

Readers : (Three)

(a) M.Sc. in Zoology and a doctoral degree with research publications in the field of aquaculture and shellfish diseases.

Research experience in coastal/estuarine zone of West Bengal in relation to mangrove dependent aquaculture is desirable.

(b) M.Sc. in Geology and a doctoral degree with research publications in the field of sedimentology and geomorphology; field experience in Coastal/estuarine sedimentology is desirable.
(c) M.Sc. in Zoology/Botany/Microbiology and a doctoral degree with research publications in the field of microbiology; knowledge in mangrove microbiology is desirable.

Lecturers (Four) :

(a) M.Sc. in Marine Biology and a doctoral degree in the field; at least 5 years research experience in the estuarine/coastal zone of West Bengal in relation to hydrobiology and productivity is desirable.
(b) M.Sc. in Biochemistry and a doctor degree with research publications in the field of lipid chemistry/phytochemistry/structural organic chemistry and microbiology; at least 5 years experience in modern spectroscopic analysis (NMR/mass spectrometry) and chromatography with special reference to gas chromatography is desirable.
(c) M.Sc. in Botany/Zoology and a doctoral degree with research publications in the field of marine estuarine plankton; at least 5 years research experience in the estuarine/coastal zone of West Bengal in relation to planktonology and hydrobiology is desirable.
(d) M.Sc. in Inorganic Chemistry and a doctoral with research publications in the field of marine chemistry; at least 5 years research experience in chemical oceanography is desirable.

MEDICINE

Departments and the Corresponding Vacancies are as follows:—

1. Department of Bio-Chemistry and Bio-Physics	Professor	1 psot
	Lecturer	3 posts
2. Department of Pathology	Professor	1 post
3. Department of Medical Microbiology & Parasitology	Reader	1 post
4. Department of Anatomy	Reader	1 post
5. Department of Pharmacology	Reader	1 post
	Lecturer	1 post
6. Department of Physiology	Lecturer	1 post

Additional information, desirable qualifications, Specialisations and experience as applicable.

Department of Biochemistry and Bio-Physics : (a) For Professor : Molecular Bio-Chemistry, Biochemical/Genetics & Immunology.

(b) For Lecturers : (i) Metabolism & Immunology, (ii) Clinical Biochemistry with Special knowledge of Chemical enzymology, drug Toxicology and Microbiology, (iii) Molecular Biochemistry & Biochemical Genetics.

Department of Pathology : Professor —Immunopathology/Neuropathology.

Department of Medical Microbiology & Parasitology : Reader : Mycology with a good general background of bacteriology.

Department of Anatomy : Reader : Research experience in Anatomy with publication specially in human embryology, teratology or human genetics.

Department of Pharmacology : Lecturer : Experience in Photochemical Research and teaching experience in Pharmacology/Chemical Pharmacology.

Department of Physiology : Lecturer: Pediatric Physiology, Haematology & Rural Physiology.

V. Job Description

The incumbent will have to be a competent teacher, capable of inspiring students towards higher learning and of developing original and significant lines of research, fructifying in the production of thesis and publications of outstanding merit. Additionally he will also be required to participate in the general planning and execution of the various academic activities, including examinations. His teaching and research expertise may be requisitioned for serving the needs of any other department (s) of the University as may be required from time to time.

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S.N. Ghosh
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Invites applications in prescribed forms available at Rs. 5/- at the University office before **May 31, 1984** for the Post of (1) Reader in Chemistry (with specialisation in Analytical Chemistry) (2) Lecturer in Chemistry (with specialisation in Organic Chemistry) for English Medium, to be filled in at its S.H.P.T. College of Science, Bombay. Posts carry U.G.C. Salary Scales, Admissible Allowances, Qualifications as per U.G.C. norms. Inquire for details at University.

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2.	Chemistry	—	Two	One
3.	Physics	—	Two	Four
4.	Education	—	Two	Two
5.	Business Management	—	—	One
6.	Life Sciences	—	One	—
7.	Economics	—	One	One
8.	Journalism	—	One	One

(2) Pay Scales of the Posts are :

(1) Professor	—	Rs. 1500-60-1800-100-2000-125/2-2500/-
(2) Reader	—	Rs. 1200-50-1300-60-1900/-
(3) Lecturer	—	Rs. 700-40-1100-50-1600/-

(3) Application forms together with details of qualifications, specialisation etc. can be obtained from the University Office on payment of Rs. 3/- in person or by sending a Crossed Indian Postal Order of Rs. 7.50 payable to the Registrar, Devi Ahilya Vishwavidyalaya, Indore.

I.S. Mehta
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ANNAMALAI UNIVERSITY

ANNAMALAINAGAR

Rajah Muthiah Dental College and Hospital

Applications are invited in the prescribed form for filling up the following teaching posts. Applications can be had from the undersigned on payment of Rs. 10/- (not refundable) by Cash/Money Order/Postal Order. Applications (with 5 additional copies) should reach the undersigned on or before 5.00 P.M. on **31-5-1984**.

Four posts of Lecturers are reserved for candidates belonging to Backward Community and 1 post of Lecturer is reserved for SC/ST candidates.

Sl. No.	Name of the post	Number of Post
1.	Professor of Operative Dentistry	1
2.	Professor of Periodontia	1
3.	Lecturer in Oral Anatomy	1
4.	Lecturer in Oral Pathology	1
5.	Lecturer in Periodontia	2
6.	Lecturer in Orthodontia	2
7.	Lecturer in Oral Medicine and Dental Radiology	2

Scale of Pay

Professor: Rs. 1500-60-1800-100-2000-125/2-2500 with usual allowances.

Lecturer: Rs. 700-40-1100-50-1600 with usual allowances.

Qualifications

For Sl. No. 1 and 2

(a) Master's Degree in Dental Surgery in the relevant subject or its equivalent, recognised by Dental Council of India.

(b) Eight years teaching experience in a recognised Dental College in the concerned subject after post graduation.

(c) Research experience desirable.

If suitable candidates are not available, candidates possessing four years experience after post-graduate will be appointed and their pay will be fixed in Reader's scale i.e. Rs. 1200-50-1300-60-1900.

For Sl. No. 3 to 7

(a) B.D.S. degree in the relevant subject or its equivalent recognised by Dental Council of India.

(b) M.D.S. Degree in the relevant subject or its equivalent recognised by Dental Council of India in any of the Dental Speciality with or without teaching experience preferred.

A. R. Lakshmanan
REGISTRAR

ANNAMALAI UNIVERSITY

ANNAMALAINAGAR

Applications are invited in the prescribed form for filling up the following teaching posts. Applications can be had from the undersigned on payment of Rs. 10/- (not refundable) by Cash/Money Order/Postal Order. Applications (with 5 additional copies) should reach the undersigned on or before 5.00 p.m. on **31st May 1984**.4 Posts of Lecturers are reserved for candidates belonging to Backward Communities and one post of Lecturer is reserved for SC/ST candidates.

Sl. No.	Name of the Post	Number of Post
1.	Professor of Population Studies (UGC VI Plan Post)	1
2.	Professor of Civil Engineering (Hydrology)	1
3.	Professor of Tamil	1
4.	Professor and Director of Physical Education (Reader's scale)	1
5.	Reader in Econometrics (UGC VI Plan Post)	1
6.	Reader in Athletics and Gymnastics (UGC VI Plan Post)	2
7.	Lecturer in Political Science (UGC VI Plan Post)	1
8.	Lecturer in Development Studies (Sociology) (UGC VI Plan Post)	1
9.	Lecturer in Statistics (UGC VI Plan Post)	1
10.	Lecturer in Marine Geology (UGC VI Plan Post)	1
11.	Lecturer in Logic/Philosophy/Metathesis/Centemporary Philosophy (UGC VI Plan Post)	
12.	Women Lecturer in Physical Education (UGC VI Plan Post) (Basket Ball)	1 1
13.	Lecturer in Horticulture	1
14.	Lecturer in Agricultural Extension	1
15.	Lecturer in Pharmacology	1

Scale of Pay

Professor : Rs. 1500-60-1800-100-2000-125/2-2500 with usual allowances.

Reader : Rs. 1200-50-1300-60-1900 with usual allowances.

Lecturer : Rs. 700-40-1100-50-1600 with usual allowances.

Qualifications

For Sl. No. 1 to 3

A person with a distinguished academic record with Doctoral Degree in the respective discipline with 10 years of experience of teaching at Post-Graduate level and of guiding research at Doctoral Level with publications of High quality to his credit.

OR

An eminent Scholar with published work of high quality actively engaged in research. Ten years experience of teaching and/or research. Experience of guiding research at Doctoral Level.

For Sl. No. 4

A person with a good academic record with a Doctoral degree or equivalent published work. Evidence of being actively engaged in (1) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years experience of teaching and/or research provided that atleast three of these years were as Lecturer or in an equivalent position.

The condition may be relaxed in the case of candidates with outstanding research work.

For Sl. No. 5 and 6

A person with a good academic record with Doctoral Degree in the respective discipline or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About 5 years experience of teaching and/or research provided that atleast three of these years were as Lecturer in an equivalent position.

The condition may be relaxed in the case of candidates with outstanding research work.

For Sl. No. 7 to 11

(a) A person with a Doctor's degree in the respective discipline or research work of an equally high standard, and

(b) Good academic record with atleast second class Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programme, the degrees in (a) and (b) above may be in relevant subject.

For Sl. No. 12

(a) A person with an M.Phil. degree in Physical Education or a recognised degree beyond Master's level or published work indicating the capacity of the candidate for independent research work.

(b) Good academic record with at least second class Master's degree in Physical Education from an Indian University or an equivalent degree from a foreign University.

Desirable

A doctor's degree in relevant subject or research work of an equally high standard.

For Sl. No. 13 and 14

A person with a Ph.D. degree or Master's degree in the subject concerned with three years experience.

For Sl. No. 15

(a) Basic degree in Pharmacy with post-graduate qualification in Pharmacology.

(b) Teaching experience preferable.

A. R. Lakshmanan
REGISTRAR

POST GRADUATE AND RESEARCH COMPLEX HYDERABAD

DAKSHINA HINDI PRACHAR SABHA

Applications are invited on the prescribed form for the following post on or before 31-5-1984 on the following address: REGISTRAR, POST GRADUATE & RESEARCH COMPLEX, KHAIRATABAD, HYDERABAD-500 004.

PROFESSOR OF HINDI

Scale of Pay

Rs. 1500-2500+Usual Allowances.

Qualifications

An eminent Scholar with published work of high quality actively engaged in Research in Hindi Literature/Hindi Linguistics. Ten years experience of Teaching and Research Experience of guiding research at Doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Desirable Qualifications

The applicant should be able to provide leadership and orientation to studies in Comparative Literature, Contrastive Linguistics and Functional Hindi. Knowledge of South Indian Language is preferred.

V. Anjaneya Sarma
REGISTRAR

BHARATHIDASAN UNIVERSITY
TIRUCHIRAPALLI 620 001

Applications are invited for the following posts in the Bharathidasan University.

Name of Post	Discipline	No. of Posts
Professor *Scale of Pay—Rs. 1500-60-1800-100-2000-125/2-2500	Chemistry	1
Reader *Scale of Pay—Rs. 1200-50-1300-60-1900	Chemistry	1
	Mathematics	1
	Botany	2
	Economics	1
Director of Physical Education *Scale of Pay—Rs. 1200-50-1300-60-1900		1

*plus allowances and other service benefits as per University rules.

Qualifications and Experience

Professor

An eminent scholar with published work of high quality actively engaged in research. About ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

Reader

Good Academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that at least three of these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record of Teaching/Research.

Explanation

For determining "good academic record" the following criteria shall be adopted.

University Reader

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

Director of Physical Education

(a) Essential

(i) Master's degree in Physical Education.

(ii) Minimum 10 years experience in organising Sports and Tournaments.

(b) Desirable

Higher qualification like M.Phil/Ph.D. in Physical Education.

Maximum Age Limit

50 years for all the posts.

The University reserves the right to fill or not to fill any or all of the above posts and to revise the qualifications, experience, age limit, etc.

The application form together with other particulars can be had from the Deputy Registrar (Academic), Bharathidasan University, No. 4, Bharathidasan Road, Tiruchirapalli-620001, Tamil Nadu, on requisition, which must reach him on or before **28-5-84**, along with crossed Indian Postal Order for Rs. 10/- (Rs. 2.50 in the case of S.C./S.T. candidates) drawn in favour of the Finance Officer, Bharathidasan University, Tiruchirapalli, payable at Tiruchirapalli.

DEPUTY REGISTRAR
(ACADEMIC) I/C

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University News

MAY 23, 1984

Re. 1

Shrimati Sheila Kaul, Union Minister of State for Education, Culture and Social Welfare and Dr. (Mrs.) Madhuri R. Shah, Chairman, University Grants Commission at the Conference of Vice-Chancellors held at New Delhi this week.

CLASSIFIED ADVERTISEMENTS

RANI DURGAVATI VISHWAVIDYALAYA, JABALPUR

No. Estt/84/778 Dated: 26th April, 1984

Advertisement

Applications are invited on plain paper giving full details for the following temporary but likely to be continued posts:

S. No.	Department	Post	No. of Post	Scale of Pay
1.	Central Library	Asstt. Librarian	1	Rs. 1370-40-1450-50-1700-EB-50-1800-60-2100 (Choudhary)
2.	-do-	Cataloguer	1	Rs. 550-25-750-EB-30-900-(U.G.C.)
3.	Mathematics	Computer Programmer	1	-do-
4.	Sociology	Technical Asstt. (Field Work)	1	-do-
5.	Economics	Technical Asstt.	1	-do-
6.	Biological Sciences	Technical Asstt.	1	-do-
7.	-do-	Herbarium Asstt.	1	-do-
8.	Central Work-Shop	Glass Blower	1	-do-
9.	-do-	Machinist	1	-do-
10.	-do-	Technician (Optics)	1	-do-
11.	-do-	Photographer Asstt.	1	-do-
12.	Journalism & Mass Communication.	Technical Asstt.	1	-do-
13.	-do-	Library Assistant	1	-do-

Qualifications

S. No. 1 : **Assistant Librarian :** Essential : (i) First or Second Class B.A./B.Sc./B. Com. degree plus a First or Second Class M. Lib. Sc.

OR

First or Second Class M.A./M.Sc./M. Com degree and a First or Second Class B. Lib. Sc. (ii) Atleast 5 years Technical experience of working in a University/College/Similar Institution of repute in a responsible capacity. **Desirable** : Knowledge of modern techniques of Documentation work including use of electronic Techniques.

S. No. 2 : **Cataloguer :** Essential : (i) First or Second Class M.A./M.Sc./M. Com. plus a First or Second Class B. Lib. Sc. (ii) 3 years Technical Experience of working in a University/College/Similar institution of repute. **Desirable :** Knowledge of modern procedures in Cataloguing Including use of electronic techniques.

S. No. 3 : **Computer Programmer :** M.Sc. in Mathematics with atleast one year's experience of working on Computer in a University or a recognised Institution.

S. No. 4: **Technical Asstt :** (Field Work): Atleast II Class M.A. in Sociology with some experience of Field Work.

S. No. 5 : **Technical Asstt. :** Atleast II Class M.A. in Economics with some experience of research work. Persons knowing English Shorthand will be preferred.

S. No. 6 : **Technical Assistant :** M.Sc. in Biological Sciences/Microbiology/Botany. Preferably with knowledge of Biological techniques/Photography.

S. No. 7 : **Herbarium Assistant :** M.Sc. in Botany/Biological Sciences. Preferably with knowledge of Herbarium Techniques/Photography. (**Note:** M.Sc. qualification for the above posts S. No. 6 and 7 can be relaxed in case of candidates with some specialization and experience in biological techniques/photography).

S. No. 8 : **Glass Blower :** 10 years schooling followed by 10 years experience in glass blowing workshop practice. Passing trade tests essential (Graded joints, making Vacuum apparatus, use of glass lathe, quartz work, etc.)

S. No. 9 : **Machinist :** Diploma in Mechanical Engineering with 5 years experience in workshop practice and ability to supervise the work of a Group.

S. No. 10 : **Technician :** (Optical Shop): II Class B.E./B. Tech./M. Sc. or a diploma in Engineering or B.Sc. with 3 years experience.

S. No. 11. **Photography Assistant :** Diploma in Photography or B.Sc. with atleast 3 years experience in photography, Dark-room practice and Microfilming etc. Preferably: M.Sc. (Physics) who can conduct photography course.

S. No. 12 : **Technical Assistant** (Audio Visual): Degree or Diploma in Audio-Visual Communication/or Equivalent Qualification. Five years experience in handling Audio-Visual equipment. **Desirable :** Master's Degree in one of the subjects of Humanities group. Good knowledge of English and Hindi/Teaching experience/Knowledge of latest development in Mass Communication technical work. Should have produced 16 mm film. Diploma/Certificate in any branch of Audio-Visual Work. Handling of equipments related to Communication System VCR Cameras, Recorders, Eng. Equipment, TV & Film Projectors etc.

S. No. 13 : **Library Assistant :** Essential : (i) First or Second Class M.A./M.Sc./M. Com. plus a First or Second Class B. Lib. Sc. (ii) 3 years Technical Experience of working in a University/College/Similar Institution of repute. **Desirable :** Knowledge of modern techniques of documentation work including use of electronic techniques.

N.B. : Preference will be given to candidates belonging to Scheduled Caste/Scheduled Tribe and other backward Classes.

A suitable higher start may be considered for candidates with higher qualifications and experience.

Canvassing in any form by or on behalf of the candidate will be disqualifications.

The applications on plain paper giving full name, address, age, qualifications, experience etc. (supported with testimonials) accompanied with crossed postal order worth Rs. 5/- payable to the undersigned, should reach here not later than **10th June, 1984.** The candidates already in employment should send their applications through proper channel.

R.N. Tripathi
REGISTRAR

Advertisement No. 7

UNIVERSITY OF POONA

COMPUTER DEPARTMENT REQUIRES

Professor : 1
Readers : 3 (1 post temporary)
Lecturers : 6 (2 posts temporary).

Temporary posts likely to be made permanent.

Grade	Rs.	Age
Professor :	1500-2500	50 years.
Reader :	1200-1900	Upto 45 years.
Lecturer :	700-1600	Upto 35 years.

Plus other allowances admissible.

Qualifications for Professor and Readers

Ph.D. in Computer Science or related areas.

Qualifications for Lecturers

B. Tech. in Computer Science with two years teaching experience or Master's Degree in Computer Science or equivalent degree.

Plus qualifications prescribed by the University Grants Commission for Professor/Reader/Lecturer.

Application forms and details of required experience etc. available on payment of Rs. 10/- in cash or by sending self-addressed envelope stamped Rs. 2.50 and Indian Postal Order of Rs. 10/- to the Registrar. Application in the prescribed form should reach the University before **31st May, 1984.**

S.P. Bhosale
REGISTRAR

UNIVERSITY
NEWS

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Editor :
M.S. RAMAMURTHY

Conference of Vice-Chancellors

25 JUN

Shrimati Sheila Kaul, Minister of State for Education, Culture and Social Welfare, Government of India, delivered the inaugural address on the occasion of the Conference of Vice-Chancellors held at Vigyan Bhavan, New Delhi on May 21 and 22, 1984. The Conference was convened by the Ministry of Education and Culture and the University Grants Commission. Smt. Sheila Kaul's address is given below.

I have great pleasure in joining the Chairman, UGC in extending to you all a warm welcome to this Conference. I am glad that besides the Vice-Chancellors who have assembled here, there are eminent experts who have joined them to discuss certain vital issues that we are facing in the field of higher education. I do hope that the deliberations of these two days will lead to certain positive recommendations which will give a new purpose and direction to our higher education system. The agenda before you highlights very clearly the major issues that require our attention. It is my earnest hope that you will give your whole-hearted attention to discussing them in great detail, and bring to bear on the deliberations your understanding and rich experience in identifying basic issues and suggesting measures for improvement.

University is a laboratory of ideas that cross boundaries and extend to the whole universe. The primary concern of universities should be to emphasise the quest of man and his relationship with the universe. They should explore sciences and arts which promote a harmonious relationship between man and the universe, and they should develop crafts and technologies that promote the efficiency and prosperity of all. And above all, they should encourage philosophical, ethical and spiritual adventure that would enable man to reduce to the vanishing-point the unknowability to what presents itself as the unknowable. The deplorable distance between this ideal and the actualities that you find in our universities gives us the measure of the work that lies ahead of us. And I should like to suggest that an exercise must be undertaken during your deliberations here to chalk out a programme of action whereby this deplorable distance can increasingly be bridged. I am happy that the Agenda which has been presented for this Conference points to directions which promise to meet this very task.

As you all know, we have still not been able to attain the constitutional goal of free and compulsory education for all children till they complete the age of 14 years. This goal was to have been realised by 1960. This target has had to be revised first to 1970, and then to 1976, and again to 1988. The Sixth Plan policy frame visualises the attainment of this goal by 1990. The new 20-point programme announced by the Prime Minister in January 1982 has given a special impetus to this programme and we do hope that by 1990 we shall be able to fulfil this objective.

We all know that our resources are not unlimited. We are also conscious of the fact that higher education and research require substantial investments and that in the modern context improvement and maintenance of the highest standards of teaching and research demand very substantial inputs. Thus the claims on the limited resources available with us are many. Happily, in higher education, we have already built up a vast infrastructure which, with marginal additional inputs, can be utilised with greater effectiveness and purpose. Further, we should accept the reality that improvements in our higher education system are not necessarily the function of additional resources. What we need, perhaps, is a bold and imaginative approach to innovate, to experiment and to initiate a process of restructuring the entire edifice of our higher education. I am sure that from the deliberations of your Conference will emerge recommendations for a meaningful reorganisation of our higher education system.

Higher education in India expanded phenomenally after Independence. We have today a total enrolment of over 32 lakhs in our institutions of higher education. This enrolment is likely to cross the 6 million mark by the year 2000 A.D. even at the average rate of growth of the last decade. The pressure on enrolment is likely to be still larger if we take into account also the spread of education at the secondary level and among those strata of society which have been outside the system for so long. Obviously, this projected additional enrolment cannot be absorbed by the formal system. We have, therefore, to think of alternative strategies and approaches from now on so that beginning with the Seventh Plan, we are able to absorb a significant part of the additional enrolment in non-formal channels of education. I am glad to inform you that the Central Government is seriously considering a proposal to establish a National University mainly to promote distance education programmes in the country.

Our experience with the existing non-formal channels of higher education has been none-too-happy. Although 23 universities offer correspondence courses, they have together not been able to attract any significant enrolment. The total enrolment in all these universities taken together is about two lakhs or so which is about 6-7% of the aggregate enrolment in universities and colleges. It is time that we asked why the non-formal programmes of higher education have not made any significant impact. Is it because they are a poor replica of the formal full-time courses? Is it because our structures and processes are too rigid to promote any innovation in non-formal programmes of education? Or, is it because the functional efficiency of our correspondence schools leave something to be desired? These questions are very important and unless we find adequate and satisfactory answers to them, our efforts to develop an effective distance learning programme in this country would remain an idle dream.

The unprecedented expansion in higher education in the early phase of development quite obviously neglected qualitative improvements. This neglect has had an adverse impact on standards of teaching, research and examinations in our universities. A major consequence of this adverse impact has been the uninspiring tone and tenor of discipline that we find in some of our universities today.

Standards of education have to be conceived not merely in terms of academic merit. Standards have also a relation to the relevance of courses and programmes, the social commitments of the universities and their contributions to national development. At the same time, it is necessary that higher education is relieved of the pressures from those who are seeking a degree merely in the hope of getting one kind of job or another. One of the objectives of the 10+2+3 pattern of education was the introduction of a massive programme of vocational education at the +2 stage. However, the programme of vocationalisation has not made any significant progress and we are now making vigorous efforts to support and strengthen this programme by providing technical assistance and also organising apprenticeship programme. Simultaneously, if we are successful in our efforts to sever the inexorable relations that now exist between university degrees and employment, perhaps it might be possible to conceive a higher education system which is of a more manageable proportion in quantitative terms.

Relevance of the programmes and courses have to be considered in terms of what is taught, how it is taught and how it is learnt. Our higher education system has often been criticised, and one feels justifiably, that the design of our courses has not changed for several decades. What is worse, these structures have, over the years, become far too rigid to promote any initiative on the part of either the teacher or the student to innovate and experiment. In consequence, education has ceased to become a creative activity for both the teacher and the student. It is against this background that we have to consider seriously what reforms we have to introduce in our higher education system to make it a dynamic instrument that can respond meaningfully to the demands of national development.

The most crucial reform, in my view, has to be in the field of under-graduate education. The UGC has, some five years ago, suggested some well-considered guidelines for restructuring our undergraduate courses in Arts, Commerce and Science subjects. The major objective of this programme is to impart greater relevance to the first degree course, to introduce an application-oriented course in the traditional 3-subject combination, and to incorporate in them a general awareness programme in the form of a foundation course. It was not the intention that such a programme would relate first degree course to any specified employment opportunity. It was, however, visualised that if the courses are restructured on these lines, the employability of graduates will improve and it would facilitate self-employment in a greater measure. It is regrettable that even after 5 years, this programme has been tried only in about 50 colleges in the country. We should ask why such programmes do not get acceptability. Let it not be said that our universities are institutions interested only in maintaining the status-quo.

It is necessary that we consider a new design for our general first degree course. As suggested in the UGC guidelines, this design should include programmes to create greater awareness among students of our country, its culture, its people, its rich diversity and above all its underlying unity. It is only then that education, especially higher education, can become a truly liberating influence on the minds of our young people which is very necessary to cement the forces of unity and integration. At the same time, these courses must provide for an in-depth study of at least two chosen disciplines, not necessarily from the same generic field. We must provide for greater flexibility in the combinations of subjects and encourage students to choose freely from a wide range of disciplines depending upon their aptitude and inclination. The third component must necessarily be in the form of a creative activity either as an application-oriented subject or any creative endeavour, the level of attainment in which can be assessed. I see no reason why scientifically developed accomplishment in a wide range of creative activities like physical education, sports, games, music, dance, drama and so on, cannot find a place in our curriculum in the universities. What we need, therefore, is to develop a system which acknowledges and recognises these endeavours and make a determined effort to promote such activities on a scientific basis amongst our students. If we can do this, I am sure that we will be able to remove the stigma of the colonial past that still persists in our higher education.

I need hardly emphasise that reforms of this kind depend entirely on the initiative of teachers and their willingness to experiment and innovate. Without the active participation and involvement of the teaching community, no qualitative change in education is possible. It is a recognition of this crucial role that teachers occupy in our social development that led to the appointment of two National Commissions on Teachers early last year. The deliberations of both these Commissions are now in the final stages and I do hope that their recommendations will soon be available. While I do not wish to anticipate their recommendations, I am sure, the teachers will recognise their crucial position in society and strive hard to make education a truly dynamic process. Indeed, on them will depend the success of all reforms. It is my fond hope that our academic community will rise to the occasion and accept one of the greatest challenges of our time in reforming our educational system in the service of the community.

No reform in education will be meaningful unless the present examination system is drastically overhauled. In fact, the existing examination procedures inspire no credibility. It is no surprise, therefore, that malpractices and unfair means dominate the existing system. If teaching and learning are transformed into creative endeavours, evaluation procedures appropriate to such endeavours can be developed. If emphasis on acquisition of degrees is eliminated, then meaningful reforms in examinations are possible. In either case, this is a matter which requires your urgent attention and I hope the Conference will give due attention to this area.

If our higher education system has to serve its social purpose, several structural reforms are imperative. Is it not ironic that a system which is so assiduously trying to uphold its own autonomy, is most reluctant to decentralise its own functioning? The programme of autonomous colleges, conceived with high expectations in initiating innovations in teaching-learning processes and evaluation methods, has virtually remained a non-starter. The academic bodies as they are existing in most universities have not shown adequate willingness to venture into new directions. It is in this context that suggestions have been made from time to time that each University should have a Planning Board as a statutory authority charged with the responsibility for revising the courses and programmes, establishing and developing linkages between Universities and other institutions, initiating and organising innovative programmes and above all bringing about the much needed flexibility in approach.

There have been suggestions in the past, and the last conference of Vice-Chancellors in 1981 made a strong recommendation about it, that there should be an Inter-University coordinating mechanism in each State which should have the responsibility for coordinating the programmes and activities of different Universities in each State. It was also visualised that such a machinery would monitor the progress of implementation of all programmes of development. Nothing much seems to have been achieved in this direction.

While I firmly believe in upholding the autonomy of our Universities and other educational institutions, I must mention that the concept of autonomy also implies a measure of accountability. It is essential that the structures of our Universities should provide for a mechanism that can undertake an objective assessment and evaluation of the academic performance of each University at regular intervals of say, five years, so that corrective measures can be taken at the appropriate time for the fulfilment of the objectives and responsibilities of our Universities.

During the past several years, the University Grants Commission has been implementing a large number of important programmes designed to improve the quality and standards of teaching, research and examination in the Universities. Substantial grants are being provided to strengthen the infrastructure; measures have been taken to formulate and implement programmes of teacher development, support for research, curricular improvement, examination reforms, scholarships and fellowships, and so on. Simultaneously, efforts have also been made to regulate standards through measures like prescribing minimum qualifications for teachers, workload, working days, minimum programme for examination reforms, etc. Programmes like college science improvement, college humanities improvement, University leadership, production of books, and so on are designed to supplement these efforts. In order to ensure greater relevance to higher education and to involve the Universities in meaningful social interaction, there are programmes like Adult and Continuing Education, extension activities, National Service Scheme, etc. One might ask: What is the cumulative impact of all these efforts? It is true that some Universities and Colleges have taken the initiative and implemented these programmes with significant results. But is it also not true that in the aggregate, the system as such has remained, by and large, static and stagnant in spite of all these efforts? It is in this context that I would expect our Universities to be more introspective and critical of their roles and perceptions of their responsibilities.

You are aware that the higher education sector has a major responsibility in producing scientists, technologists and other skilled personnel required for the economic development of the country. In this context it is imperative that our education and training programmes in institutions of higher learning should continue to remain of high quality and up-to-date, as well as relevant to our scientific and technological needs. Removal of obsolescence of equipment in science and engineering laboratories, and updating of our faculty competence particularly in the areas of emerging technologies must be given the highest priority in resource allocation in the higher education sector so that we could continue to keep a place of honour in the comity of scientists and technologists of the world and help accelerate the process of national development and social transformation through the use of science and technology in the solution of our problems.

Highlights

- **University is a laboratory of ideas that cross boundaries and extend to the whole universe. The primary concern of Universities should be to emphasise the quest of man and his relationship with the universe.**
- **The Sixth Plan policy frame visualises the attainment by 1990 of the Constitutional goal of free and compulsory education for all children till they complete the age of 14.**
- **We should accept the reality that improvements in our higher education system are not necessarily the function of additional resources. What we need, perhaps, is a bold and imaginative approach to innovate, to experiment and to initiate a process of restructuring the entire edifice of our higher education.**
- **Beginning with the Seventh Plan we should be able to absorb a significant part of the additional enrolment in higher education visualised to take place by 2000 A.D. in non-formal channels of education. . . . the Central Government is seriously considering a proposal to establish a National University mainly to promote distance education programmes in the country.**
- **It is necessary that we consider a new design for our general first degree course. . .this design should include programmes to create greater awareness among students of our country, its culture, its people, its rich diversity and above all its underlying unity. We must provide for greater flexibility in the combinations of subjects. The third component must necessarily be in the form of a creative activity.**

Universities have a special role in the promotion of research. It is sometimes suggested that our efforts in the past to establish and develop a chain of specialised research institutions and laboratories outside the university system have in some measure undermined the pivotal role that universities play in the promotion of research. We have in a short span of time been able to develop a vast infrastructure of specialised research facilities which are crucial to the development of industry, defence, agriculture, atomic energy, etc. This approach has, indeed, paid us rich dividends as is obvious from the spectacular achievements that we have registered in several fields of science and atomic energy. But what is important is to remember that it is the university sector which has made the establishment and development of these research institutions possible not only by providing the necessary manpower but also the necessary scientific backing which sustain applied research.

While research in the universities needs to be strengthened and supported, we have also to remember that our resources will not permit duplication of facilities to support research in the universities and at the same time develop specialised research establishments outside the university system. The research facilities that we have created whether in the universities or outside, are our national resources and it should be our endeavour to devise ways and means to utilise these facilities in the best interest of the nation. Here again, some rethinking on the part of the universities might be useful. For instance, development of mutually beneficial linkages, establishment of mechanisms that can foster and develop such linkages, and more flexible approach by universities in their relations with other autonomous organisations, might be of some advantage. It is equally important that in establishing new research facilities due note is taken on the capabilities of our university system, and new research institutions are established as far as possible within the universities, or in close association with them. Similarly, it is also necessary to develop facilities, especially in those areas which require heavy investments, on a common basis that a number of universities can share. I am glad to say that the Government have decided to amend the UGC Act to enable the Commission to establish and fund such facilities which, I am sure, will go a long way in filling a major gap that exists at present.

I have made a mention earlier of the urgent need to reform our education system. In this effort, it is important that we give due attention to certain other areas which have been sadly neglected in the past. For example, we have not in the past given due attention to the fact that value orientation should be a central focus of education. The programmes of study as at present offered in most universities and colleges are not devised to emphasise this aspect. A careful review of the programmes and reformulation of courses could provide, both in content and thrust, the necessary value orientation. Similarly, the foundation courses which should be an integral part of the first degree courses, should also emphasise on cherished values.

Another area that requires attention is environment. It is necessary that we relate our educational programmes to our environment not only from the point of view of protection, preservation and conservation, but also from the point of view of ensuring harmony between man and his environment.

A third area which has hitherto not received the attention that it deserves is physical education. Our approach apparently has so far been to leave physical education as a voluntary activity and provide for it only marginal facilities. Suggestions made in the past that physical education should be made an integral part of the first degree course did not find favour with most universities as they were not in favour of introducing physical education as an examination subject It is not desirable that we treat physical education as one of these two extremes, a purely voluntary activity or a compulsory examination subject. A necessary and practical approach is to treat physical education as an essential activity and to give due recognition and credit for participation in physical education that can be subjected to a scientific test of physical fitness. We need also to provide facilities on a massive scale for participation in physical education. If we do so, we could ensure a greater sense of discipline and team work among our students.

There are a few other aspects to which I would wish to draw your particular attention. Education has a special role and responsibility in the upliftment of the socially and economically deprived sections of our society and those belonging to the backward and remote areas of our country. We have decided that 15% of all seats in all courses should be reserved for Scheduled Castes and 7½% for the Scheduled Tribes. However, their total enrolment in Universities and Colleges is still far less than the reserved quota, accounting for only about 9%. The argument often advanced is that the drop-out rate among them is very heavy, and that there are not enough applicants belonging to these categories who seek admission to many courses. There are also at the same time complaints that students belonging to these categories are discriminated against, and that they are denied admission to many prestigious institutions and courses. This is a matter that should cause serious concern. It is true that social and economic backwardness often does not provide an atmosphere conducive to academic pursuits. But, it is our responsibility to create conditions in which these sections of our society are helped to overcome their backwardness and deprivation. We should organise and implement special programmes for their benefit. They should be assisted to remove their academic deficiencies through special coaching and remedial programmes. We should also organise for them special programmes that would enable them to secure employment by preparing them for various competitive examinations. The problems that these unfortunate sections face are acute, and if we leave their development to themselves, we would only be perpetuating their backwardness. Their special situation calls for non-conventional remedies. I do hope that our Universities would respond to this challenge and take upon themselves this great social responsibility.

What applies to the Scheduled Castes and the Scheduled Tribes applies equally strongly to other weaker sections, especially the minorities. The Prime Minister has on several occasions emphasised the special responsibility of education towards the minorities and in promoting their social and economic advancement. In this case also, the conventional approaches will have to yield place for mor radical and non-traditional remedies. There ma also have to be an effective movement away from the preoccupations with the conventional evaluatio procedures which often condemn childran, especiall those from the backward and deprived sections, t their "place" in the educational experience, and i the society. It is in evolving these non-conventional approaches, in developing and implementin more effective and purposeful strategies that th dynamism and vision of our Universities have t become more apparent than in the past.

Before I conclude, I wish briefly to refer t another item of the agenda namely, managemen

Highlights

- It is my fond hope that our academic community will rise to the occasion and accept one of the greatest challenges of our time in reforming our educational system in the service of the community.
- Is it not ironic that a system which is so assiduously trying to uphold its own autonomy is most reluctant to decentralise its own functioning?
- While I firmly believe in upholding the autonomy of our Universities and other educational institutions, I must mention that the concept of autonomy also implies a measure of accountability.
- A careful review of the programmes and reformulation of courses could provide both in content and thrust, the necessary value orientation which in the past did not receive its due recognition.
- A necessary and practical approach is to treat physical education as an essential activity and to giv due recognition and credit for participation in physical education.
- It is our responsibility to create conditions in which Scheduled Caste and Scheduled Tribe students and other weaker sections especially minorities ar helped to overcome their backwardness and deprivation.

of universities. The problems of management of a modern university are far too complex Indeed, some of our university campuses have become major townships dealing with such operations like municipal services involving large water and electricity systems, roads, sanitation, and so on, not to speak of administering a large number of departments, several thousand students, non-teaching employees and teachers. The management models that we have been following unfortunately, remained far too conservative aud rigid. What is more, the problems of social development have also their reflection in the life on the campus. On the other hand, the age-old structure have become too inflexible to promote any worthwhile innovations and reforms in higher education. Curricular reforms which are vital to make higher education a process for the development of creativity and integrated personality of the students have become virtually impossible. The existing mechanisms often find themselves unable to respond to the demand of national development. It is time that we consider development of an appropriate model for the management of our universities which can perform all these functions and indeed make universities dynamic instruments of change and development. I have had occasion to announce in Parliament that we would soon be considering a comprehensive legislation in the field of higher education especially in the matter of governance I do hope that your deliberations during these two days on this subject would be of considerable significance to our efforts in crystallising the proposed basic ideas for the legislation.

The last Conference of Vice-Chancellors was held about three years ago at a time when the finalisation of the Sixth Plan was nearing completion. This Conference is being held at a time when we have just initiated the process of preparing the Seventh Plan. I am sure that the recommendations of this Conference could be appropriately reflected in the Seventh Plan for higher education and that in considering the agenda and making your recommendations you will keep this aspect also in mind. I am glad to inform you that your Conference will be followed by a Conference of Education Secretaries and of Education Ministers. It is our effort to see that the conclusions and recommendations emerging from the discussions on academic problems at your Conference receive necessary administrative and policy level support.

Friends, I am, needed, very happy to be with you this morning and once again I would like to thank you all for enabling me to meet you and have the benefit of your views on certain matters of national importance. I do hope that your deliberations on these two days will lead to finding appropriate solutions to some of the major problems in our education. It is my earnest hope that a purposeful Plan of action would emerge from these deliberations.

I have great pleasure in inaugurating this Conference. □

Address by Dr. (Mrs.) Madhuri R. Shah

At the Conference of Vice-Chancellors held at Vigyan Bhavan, New Delhi on May 21 and 22, 1984. Dr. (Mrs) Madhuri R. Shah, Chairman, University Grants Commission delivered an address. Her address follows.

It is a pleasure as well as a privilege for me to extend a warm and cordial welcome to all the Vice-Chancellors and eminent educationists who have so kindly responded to our invitation to participate in this conference. Nearly three years have elapsed since we met last. During this interregnum, many far-reaching developments have taken place in the field of higher education which make it imperative for us to have a fresh look at our policies and ongoing programmes, as also to determine the new thrusts and strategies especially in the context of the Seventh Plan. Our agenda is rather heavy for a two-day Conference; encompassing as it does the restructuring of higher education from the point of view of the over-all national objectives, standards of teaching and research, the relationship between education and development, problems of management in all its aspects and the emerging areas of importance. I am confident that your deliberations will have an important bearing on the logistics of higher education during the coming decades and that the debate here will generate more light—than heat. The various issues included in the agenda are particularly important in the context of the turn of century which many of us may be witnessing in our life time—not so much by way of crystal-gazing as from a specific consideration of the central tendencies and factors which are capable of modifying or influencing the directions of growth and the shape of things to come.

I do not wish to go into the balance sheet of higher education nor to draw the areas of light and shades but to share some of my thoughts with you on the profile of higher education today and the perspectives of development. An important point that we have to bear in mind in this exercise of restructuring of courses, curricula, policies and programmes for the future is that the university system in our country did not evolve itself nor did it grow from the native soil. It was geared to the narrow and limited purpose of training civil servants, to meet the needs of administration or subserve the vested interests of an elite group. The system laid emphasis on individual accomplishments, routine type of information and regurgitation of knowledge, while it neglected social objectives and the needs of development. Even important areas in science, engineering and technology, which were otherwise relevant to national development, were neglected. While we are trying to develop our system of education today at all levels to meet the needs and aspirations of our people and to enjoy the fruits of modern science and technology, there are several obstacles and constraints in the process of development. In this context, I would like to refer to some of the conclusions of Gunnar Myrdal from his treatise on 'Asian Drama' to show how attitudes antagonistic to development have taken firm root in countries of the Asian region, including India. He talks of the dead hand of the past and points out that : (i) large sections of population in these countries suffered from ignorance, in which one element was a low rate of literacy and even lower rate of functional literacy; (ii) the training of teachers was neglected, particularly at the primary level and usually at the secondary level; (iii) the methods of teaching in the pre-colonial era were all heavily weighted in the direction of making the pupils memorize texts; (iv) teaching tended to be dogmatic and authoritarian; it did little to encourage critical attitude or an interest in self-education, it discouraged independent thinking and the growth of the inquisitive and experimental bent of mind that is so essential for development; (v) the university student became aggressively conscious that he belonged or would belong to an elite group; (vi) a degree became the object of pursuit, rather than the knowledge and skills to which the degree should testify; (vii) they developed a contempt for manual work and most of the educated persons regarded their education as the badge that would relieve them of any obligation to soil their hands. Even when schools of engineering and other technology institutes were established, students commonly expected—and were expected—to become deskmen.

The fact that many universities in Asia are replicas of Western Universities and do not have an ethos of their own is brought out in the following statement in the final report of the Fourth Regional Conference of Ministers of Education and those responsible for Economic Planning in Asia and Oceania held at Colombo in July-August 1978. "The pattern of the modern educational system in most Asian and Oceania countries had been greatly influenced by Western models. . . . These models often do not suit the social-economic conditions and development of requirements of the societies concerned, or the preservation of their cultural identity" It is my belief that a university is nothing more than an exotic plant if it has no roots in its history, philosophy and culture and if its teaching and research programmes, reading and reference materials, do not draw their examples from the local environment. It should be the aim of the university that every student going out of its portals takes with him an understanding of his cultural heritage, its achievements and shortcomings, its triumphs and travails. However, the transmission of knowledge, tradition and culture from one generation to another does not mean that the ideas and ideals of the past should not be interpreted in the light of modernity or that universities should encourage obscurantism. What it implies is that the cultural identities of the people should not be allowed to be submerged and each and every university student should know what he is heir to.

The university has also to recognize the inherent truth that it cannot function in a vacuum; it must reflect the characteristics and aspirations of the society which supports it. That this has not happened to the desired extent is partly due to historical circumstances and colonial legacy but mainly due to the inability of our universities to adjust themselves to the new conditions. In this context, we have to answer several questions relevant to the formulation of an education policy and agenda, such as the following :

(i) Should the formal system of education, which are often wrapped up in their 'neutrality and intransigence' have a monopoly for imparting knowledge or should there be alternative delivery systems like distance-learning comprising correspondence courses, radio and television programmes, part-time evening institutes and Open Universities?

(ii) Should education be fitted into a strait-jacket and constrained to follow a single track and a set pattern or should there be enough flexibility, choices and alternatives to enable the student to move horizontally as well as vertically?

(iii) Should the society become a hierarchy, in which those who are educated do not soi their hands and others who do manua work have no opportunity for receiving th benefits of education?

(iv) Should the centre of gravity be on teachin or learning; on mere acquisition of knowledge or on the student experimenting wit his tools in the laboratory, browsing in th library and developing independent thinking, critical faculty and the capacity to appl knowledge to a solution of societal problems?

(v) Should not the system of education enabl the learner to learn whatever he wants t learn and to learn the contents at his ow pace and at a place of his own choosing?

(vi) Should our paradigm of higher educatio be such that jobs and degrees become inseparably linked and education becom subservient to the needs and requiremen of the labour market and consumer society Does not education lead to economic as we as cultural satisfaction?

It is not easy to answer the above questio without spelling out the new philosophy of educ tion. This is what was precisely attempted by th

University Grants Commission in its document entitled ‘Development of Higher Education in India—A Policy Fame’. The document rightly emphasizes that “the most urgent and significant reform needed in the field of education is to transform the value system, the basic structure and processes of the educational system, to make it flexible and dynamic and to move in the (ultimate) direction of providing opportunities for life-long learning to every individual. This transformation will emphasise ethical values and human welfare enriched by science and technology. It will also imply the shifting of emphasis from teaching to learning, from the individual to social objectives and from mere acquisition of information to the development of skills and character formation based on knowledge”.

Highlights

- **The university system in our country did not evolve itself nor did it grow from the native soil. It was geared to the narrow and limited purpose of training civil servants, to meet the needs of administration or subserve the vested interests of an elite group.**
- **A university is nothing more than an exotic plant if it has no roots in its history, philosophy and culture and if its teaching and research programmes, reading and reference materials, do not draw their examples from the local environment.**
- **The university has also to recognize the inherent truth that it cannot function in a vacuum; it must reflect the characteristics and aspirations of the society which supports it.**
- **It is becoming increasingly important to re-orient higher education in order to reverse the present tendency of the student becoming alienated from his surroundings and the basic problems of the society. Universities no longer function in the vacuum of intellectual abstractions but treat the society as a laboratory and a ‘living context’ of a reality around them.**
- **The motto in the years to come will be that extension of knowledge is useful not only to the community but, is a source of enrichment to the university itself, as without mutual interaction, neither teaching nor research can ever become relevant.**
- **Thus enrolments in higher education have gone up by about 16 times during the last three decades, making higher education a gigantic enterprise and the problems of resources and management highly intractable.**

It is becoming increasingly important to re-orient higher education in order to reverse the present tendency of the student becoming alienated from his surroundings and the basic problems of the society. In this connection, the following commentary of Sir Eric Ashby on African Universities seems to be highly pertinent to the situation obtaining in contemporary India.” On an African the impact of a university education is something inconceivable to a European. It separates him from his family and his village (though he will, with intense feeling and loyalty, return regularly to his home and accept what are often crushing family responsibilities). It obliges him to live in a Western way, whether he likes it or not. It stretches his nerve between two spiritual worlds, two systems of ethics, two horizons of thought. In his hands he holds the terrifying instrument of Western civilization; the instrument which created Jefferson’s speeches, the philosophy of Marx, the Mathematics and Chemistry of atomic destruction. His problem is how to apply this instrument to the welfare of his own people. But he has no opportunity to reflect on this problem. For one thing, the gap between himself and his people is very great. . . . the universities and their graduates are isolated from the life of the common people in a way which has had no parallel in England since the middle ages. This is the peculiar dilemma of the African University. Because of this dilemma the social function of the university in Africa cannot, for a generation at least, be comparable with its social function in Britain. And the African graduate, who alone is competent to reflect on the social function of universities in Africa, has no time for this task”. I have quoted from Sir Eric Ashby at length to bring home the point that the isolation of university student from the problems of the society can have dangerous consequences unless we recognize the inherent truth that a university in modern times cannot function in an ‘ivory tower’ but must inevitably become a ‘service station’ for the community. It is for this reason that in recent years, a new dimension has been added to the role of universities—that of extension, which passes under different labels in different countries of the world such as adult education, continuing education, life-long education, non-formal education and extension programmes. This is logical extension of the functions of the university to its immediate neighbourhood and the community at large. Universities no longer function in the vacuum of intellectual abstractions, but treat the society as a laboratory and a ‘living context’ or a reality around them.

The scope of these programmes is vast and varied but the objective is to extend knowledge to each and every member of the society including the illiterate and the neo-literate and also to update the skills and abilities of various occupational groups. It is recognized that learning is a life-long activity and as such, even specialists have to refresh their knowledge from time to time through exposure to new techniques and other kinds of experiences. It is possible that in some societies, greater emphasis is placed on the needs of the less-privileged and under-privileged sections like factory workers, slum dwellers, fishermen etc., but the target groups are to be selected on the basis of carefully surveyed educational needs and priorities. The motto in the years to come will be that extension of knowledge is useful not only to the community but, is a source of enrichment to the university itself, as without mutual interaction, neither teaching nor research can ever become relevant.

From the basic philosophy of education which should inspire and inform us, I now come to the symbiotic relationship between education and development, which is far more complex. It is important to view development as a holistic approach in its economic, political and cultural aspects and merely as a process, of responding to the needs of a consumer society. It is a long-term and well-coordinated plan for integrated growth and from this point of view the development of human resources becomes a key factor. It is equally important to ensure that there is a proper fit between education and jobs and with that end in view, the growth of higher education has to be properly regulated. In this connection it will be recalled that in the fifties and sixties, there took place in our country a spectacular linear growth at the tertiary level. The second world war had established the superiority of industrially advanced countries over those with a poor industrial base and infrastructure. The growth of education was also a direct outcome of economic theories which rightly treated education as capital. Since then, because of the mismatch between education and jobs and constraints regarding the availability of resources, there has been a general tapering off demand but the curve of higher education enrolments is still a rising curve. According to Unesco projection, the total entrolment in higher education as a proportion of the age-group 18-23 will increase from 15 per cent in 1981 to 17 per cent in the year 2000 A.D. This will mark a significant increase when offset against the expected rise in population during the period under reference.

In India, the growth rate of enrolment at the level of higher education was as high as 12.4 per cent per annum during the decade 1951-52 to 1960-61 and 13.4 per cent during the decade 1961-62 to 1970-71 This however, dropped sharply to 3.4 per cent during 1970-71 to 1977-78; then rose marginally to 3.6 per cent between 1977-78 to 1981-82. Although the growth rate came down substantially, there was no decline in student enrolment. The total enrolment at the level of higher education indeed jumped from 1,73,696 in 1950-51 to 2,94,815 in 1955-56; 5,56,559 in 1960-61; 10,66,884 in 1965-66; 19,53,700 in 1970-71, 24,26,109 in 1975-76 and 31,36,986 in 1982-83. Thus enrolments have gone up by about 16 times during the last three decades, making higher education a gigantic enterprise and the problems of resources and management highly intractable.

What are the implications of this upsurge in higher education? At a conference held on January 5-7, 1971 at Cambridge, United Kingdom, everyone rejected the Kingsley Amisview that 'more means worse' and discussed the question whether 'more means different'. Today also, the question is not whether expansion of higher education is compatible with the maintenance of standards but how to find the best possible fit between educational and economic needs, education and manpower requirements and growth and employment opportunities. This is the challenge of our times and it is this which underlines the need for making education more relevant and functional.

In the decades to come, there is going to be a revolution of rising expectations. It is no longer possible for universities to meet the demands of the society for new types of courses and specialisations following the progress on the road to industrialization and the intensity of international division of labour. Jobs in future are likely to acquire greater specificity and therefore courses should have a more direct link with job opportunities. While our scheme of restructuring of courses is not directly linked to the availability of jobs, it is bound to generate greater self-confidence amongst university graduates by exposing them to new types of courses with practical orientation and local relevance.

Highlights

- **Today also, the question is not whether expansion of higher education is compatible with the maintenance of standards but how to find the best possible fit between educational and economic needs, education and manpower requirements and growth and employment opportunities. This is the challenge of our times and it is this which underlines the need for making education more relevant and functional.**
- **Our scheme of restructuring of courses is not directly linked to the availability of jobs. It is bound to generate greater self-confidence amongst university graduates by exposing them to new types of courses with practical orientation and local relevance.**
- **As the base of the education pyramid expands in the years to come, more and more students will possibly come from what may be called the "first generation of learners". This will call for differentiated learning systems suited to the learning needs of individuals from widely differing backgrounds and a radical departure from the existing courses of study, curricula, reading materials, methods of teaching and evaluation which are heavily weighted in favour of the haves rather than the have-nots.**
- **It is important to pay immediate attention to different aspects of management; the most important being that educational management should be viewed as a dynamic and evolving concept so that it may respond adequately to the changing educational needs of the society. In the ultimate analysis, there should be a convergence between the institutions of higher education and goals of development at all levels, viz., national, regional and local.**

As the base of the education pyramid expands in the years to come, more and more students will possibly come from what may be called the "first generation of learners". In academic attainments, these students will be different from those who come to universities and colleges with a generation of learning behind them, have quiet corner for study at home and can afford to buy books, pay tuition fees and forego earnings. The new generation of students will possibly come from socially disadvantaged groups. Many of these students also likely to come from illiterate families, as will be evident from the present level of adult illiteracy in our country. This will call for differentiated learning systems suited to the learning needs of individuals from widely differing backgrounds and a radical departure from the existing courses of study, curricula, reading materials, methods of teaching and evaluation which are heavily weighted in favour of the haves rather than the have-nots. It is for this reason that we are now concentrating on the growth of institutions mainly catering to the weaker sections of the society instead of merely making a routine kind of provision for remedial courses or compensatory coaching.

More important than the curriculum is the mode of communication and presentation by the teacher and the competence of the teacher himself. The teacher has an important and, in fact, a crucial role to play in our effort to relate education to the needs of the community, national development and also in bringing about equality of opportunity. It is the responsibility of the teacher to impart knowledge, to extend the boundaries of knowledge through research, investigation and critical enquiry, to motivate students to enrich the discipline, and to inculcate values in keeping with the ethos, cultural heritage, social objectives and value-system of the country. Therefore, the importance of some of the measures we have taken in recent years prescribing the minimum qualifications of teachers, norms of workload of teachers, minimum number of working days and increasing opportunities being made available for the training and orientation of teachers, academic mobility, and faculty development, in general.

During the course of our deliberations, there will be a detailed consideration of the problem of maintenance and upgradation of standards which is included in the agenda and which, if I may say so, is crucial for the very survival of our system of higher education. In this connection, I would particularly like to mention some recent measures initiated by us such as scholarships for undergraduate and postgraduate students, summer schools for talented students, setting up of information centres to provide the latest documentation to scholars and scientists in each and every conurbation in the country, creation of a cadre of research scientists, support for the publication of quality journals etc. We have also taken another decision with far-reaching implication—that of setting up a National Educational Testing Unit in the Commission. It is expected that the development of national-level tests would help overcome the problem of comparability in marks awarded by different universities, increase the reliability and objectivity of examinations for the purposes in view in particular and, act as a pace-setter for the improvement of syllabi and methods of teaching/evaluation in the university system, in general. I am glad to say that a number of universities have responded positively to our suggestion for holding this test for the award of junior research fellowships and I am sure, we will watch the results of this experiment with great interest and extend it further to other areas, in which common selection procedures may be involved.

While thinking about the commonness and communality of our problems, I would also like to say that universities in our country have many achievements to their credit and it is the personnel trained in our universities and colleges who provide top and middle-level cadres for the diverse sectors of our economy and who have given a strong industrial, scientific and technological base for a self-reliant economy. However, there is also an uneasy feeling and lurking suspicion that some of our institutions have not been functioning at the optimal level. The administrative structure in some places seems to be so fragile that it is easily shattered on the slightest pretext. A few universities are not able to hold their examinations according to schedule or in a fair and impartial manner. Buildings, plant and equipment are not always used to the maximum advantage. It is, therefore, important to pay immediate attention to different aspects of management; the most important being that educational management should be viewed as a dynamic and evolving concept so that it may respond adequately to the changing educational needs of the society. In the ultimate analysis, there should be a convergence between the institutions of higher education and goals of development at all levels, viz., national, regional and local.

With these few words, I wish you all success in your deliberations and assure you that the University Grants Commission and the Ministry of Education and Culture would give their most earnest consideration to your suggestions and recommendations. □

Adult Education Work at Gujarat Vidyapith

The Gujarat Vidyapith Adult/Continuing Education Centre convened on April 2, 1984, a one-day workshop of 24 voluntary agencies of Gujarat to seek their co-operation in implementation of Point No. 16 of 20-point programme on Adult Literacy and Universalisation of Primary Education. The Vice-Chancellor Prof. Ramlal Parikh inaugurated the workshop and stressed the need for making the Adult/literacy programme more comprehensive by including Population Education and Non-formal education for drop-outs and Health Education as its major components. 24 voluntary agencies discussed various strategies of giving durability and continuity to Adult literacy programmes particularly at the post-literacy stage so that neo-literates do not lapse into illiteracy again but continue their learning throughout the life. For this purpose, "LOK-JIVAN", a monthly published by Navjivan Trust is being utilised for producing reading materials including non-verbal material. The agencies decided to make its effective use, particularly the wall-papers published through it.

In another workshop held on 9th and 10th April, 1984, Project Officers of the Universities and Voluntary agencies together examined in detail the existing curricula for training in three working groups for :

(1) Instructors Training;
(2) Supervisors Training;
(3) Project Officers Training.

The Vice-chancellor stressed the need for using simple & colloquial language, and not use scholastic language which will deprive neo-literates from understanding what is being taught. It was felt by the workshop that no time should be wasted in inauguration and valedictory functions during training period and there should be a precise handbook on the guidelines of how to conduct the training. It also recommended greater allocation of time on practical work in comparison to lectures.

The workshop then formulated a new functional curricula for Instructors comprising 55 hours for first 10 days —25 hours in the second phase of 5 days and 18 hours in the third phase of 6 days totalling 21 days.

Gujarat Vidyapith also conducts the State Resource Centre for Adult and non-formal Education and also the Department of Continuing Adult and Extension Education. Its activities and programmes include the preparation and publication of teaching-learning material, 5 primers including one primer exclusively for women learners, one for slum dwellers and two primers for tribals—Rathwas and Dangis; 3 work books for the adult learners; teachers hand books for all the five primers for the use of instructors; 39 non-verbal charts in three sets to be used by the instructors for discussion; handbooks named Navjagaran Praudh Chitra Pathawali Book-I and Book-II based on the non-verbal charts pertaining to various problems of life of the adult learners; One book on teaching of functional arithmatic to the adult learners for use by the instructors to teach basic numeracy; Workbook on evaluation Mulyankan Marg Darshika; Supplementary follow up material; (a) 5 books which have been awarded prizes in the national adult literature competition, (b) 42 books & booklets for post-literacy programme for the neoliterates and (c) 17 other books, booklets, pamphlets and other reference materials); Materials for neo-literates through 'Lokjeevan' a monthly of Navjivan Publishing House; Posters & brochures for the Adult Education Centres; 23 types of registers and forms for the use of supervisors & instructors; 92 project officers, 1244 supervisors, 204 resource persons and evaluators have been trained through different training camps as part of the programme of Training of Adult Education functionaries.

18 meetings at different places of Gujarat were held for the workers of voluntary agencies.

Seven projects on Adult Education were completed and two major research projects are on hand. One special project is a developmental research programme for Rathwa tribals of Gujarat in which Benchmark survey of 3000 tribal families is being undertaken.

118 charts on Adult education have also been prepared. 16 sets of charts including posters, models & puppets have been prepared for exhibition in each district.

Besides, 160 Adult Education Centres have been started in six different rural campuses of Gujarat Vidyapith. Village profiles of all the villages are under preparation. Two types of multi-media packages are also under preparation.

National seminar on north-east priorities for social science research

A three-day national seminar on "Priorities for Social Science Research for North-East India concluded on April 13, 1984 at the Manipur University premises. The seminar was jointly sponsored by the Indian Council for Social Science Research, New Delhi and the Manipur University.

The seminar which had 5 sessions was inaugurated by Prof. K.J. Mahale, Vice-Chancellor. He thanked the eminent social scientists who gathered at the Manipur University to identify the Research priorities in North-East India.

In his keynote address, Prof. B.K. Roy Burman of the Council for Social Development, New Delhi and also Chairman of the Advisory Committee of the Indian Council for Social Science Research on North-East India spelt out the rapid overview of social context of Social Science Research, status of Social Science Research and problem areas of Social Science Research.

Dr. D.D. Narula, Member-Secretary, ICSSR made observation on the recommendations of the seminar which would receive active consideration of the ICSSR. Prof. P.C. Goswami of Gauhati University submitted 22 items of priorities for research in the region.

Shri Gangmumei Kabui of Manipur University who was the co-ordinator of the seminar presented a general report of the three-day seminar.

The seminar adopted various priorities in North-Eastern region. They are the following:

(1) Delineation of the contents of economic development keeping primarily in view the improvement of the quality of life of diverse social groups of the region.

Development strategy for the region and identification of the constraints of development.

(2) Population studies with special reference to human education resource formation and Manpower Planning, employment keeping in view the perspective of economic and social geography.

(3) Resource appraisal : Preparation of inventories of resources, (including resource atlas), resource utilization and ecological balance. Implications of alternative strategies for the various segments of the population.

(4) Flow of financial resources through budgetary and outside budgetary channels, such as financial institutions. Structural constraints and imperatives having a bearing on the flow of resources.

(5) Spread and distribution of social and economic infrastructure including transport and storage along with assessment of the norms and criteria adopted for location and distribution of the same.

(6) Study of land management, emergent patterns therein and production relation.

(7) Technological changes with reference to indigenous methods of production.

(8) Interdependence between North-East India and the rest of India, and the interdependence among the various entities of North-East India.

(9) Linkages and relations beyond frontiers.

(10) Criteria for determination of poverty in specific micro-regional context of North-East India. Incidence of poverty in these setting and evaluation of poverty alleviation programmes.

(11) Shifting cultivation: Diversities of techniques and related social organisation of labour, productivity and appropriation of surplus if any.

(12) Study of indigenous skill and institutional framework for perception, urbanization and utilization of resources and absorption of the stimuli of change.

(13) Historical process of social transformation of diverse population in the region.

(14) Ethno-history of the varies population.

(15) Study of intra-regional and inter-regional migration, particularly since independence.

(16) Study of ethnicity, inter-ethnic relations and identity crisis.

(17) Various types of social movements including protest movements in North-East India and the factors and process underlying such movements.

(18) Urbanisation:

Pattern of Urban growth and development, spatial organization, role of urban centres as loss of power and intellectual leadership.

(19) Study of traditional art forms including performing arts in various communities and regional settings, their role in the emerging contexts. Identification of creative professional master craftsmen and repositories of traditional learning. Social organization of the marketing of the utilization of craft products.

(20) National question in India with particular reference to North-East India.

(21) Socio-linguistic studies with particular emphasis on social communication, bilingualism and multilingualism. Traditional social communication and mass media.

(22) Class formation as a consequence changing production relations.

(23) Study of customary law and processes among tribal population; and

(24) Ecological Planning, traditional modes of resource utilization and social cultural cost of modernization.

MSc and MPhil courses in limnology at Bhopal Varsity

Bhopal University has started a two-year M.Sc. and a one-year M. Phil degree course in Limnology (Freshwater Science). At present, it is the only course of its kind in the country, where degree in this new developing subject of multidisciplinary nature, is given. The students are imparted training in both theoretical and practical aspects of pure and applied limnology.

Admission to M.Sc. Degree course in Limnology is made on the basis of marks obtained in theory papers of all examinations of Bachelor's degree offering zoology, botany and chemistry with a minimum of 50% marks.

During the I Semester there are two papers, one each on Physical Limnology (Introductory; Geography; Hydraulics, Limnophysics; Geohydrology etc.), Ecology and Biostatistics and a Practical. During the II Semester there are two papers, one each on Chemical Limnology (Dissolved gases, nutrients N, P, S, etc.) and Biological Limnology (Plankton, Periphyton Benthos, Nekton and macrophytes etc.) and a practical. During the III Semester again there are two papers, one each in Principles of Biochemistry and Limno-Microbiology (Introduction, various forms of microbes, algae, aquatic fungi etc.) and a practical. During the IV Semester there are two papers, one each in

Aquaculture (Inland Fisheries, Algal culture) and Public Health (Water and waste water Examination and treatment, Management of Limnic Ecosystems), together with a practical.

In between the first & second and third & fourth semester break all students have to go for educational tour in various parts of the country to visit lakes and laboratories. They have to submit a tour report with their records.

In semester break (Summer vacations) students are proposed to be nominated to work in various laboratories of some industry having water treatment plants, Water Pollution control and Prevention Boards, Fisheries, National Environmental Engineering Institute, Nagpur etc. for practical training extending for a period of 2 to 3 weeks.

Sociology Department of RU recognised for special assistance

The University Grants Commission has recognized the Department of Sociology, Ravishankar University, as a centre of excellence and identified it as a Department of Special Assistance. So far only two university departments of Sociology in the country (those of the University of Delhi and the Panjab University, Chandigarh) have been given such recognition. The Department of Sociology of the Ravishankar University is now the third national centre of excellence for sociology in the country.

Research work on folk culture, elite tradition, and the dynamics of Indian society, done in this Department has received wide recognition.

The University Grants Commission has also identified traditional folk culture, elite tradition, and dynamics of Indian society, as the thrust areas for special assistance.

In order to promote study and research work in the thrust areas identified by the Committee, the University Grants Commission has sanctioned besides several senior teaching positions, Research Associateships, Junior Research Fellowships and a number of National Scholarships. The purpose of these National Scholarships is to provide an opportunity to bright students of various parts of the country to come to this Department for the benefit of high quality learning on these specialized aspects.

The University Grants Commission has also sanctioned substantial grants to the Department for the purchase of books and journals, equipment and material, publication, and field work. It has also agreed to provide 100% assistance for the construction of a building for extending the Department.

Academic link between SNDT and University of Edinburgh

In the area of Child Nutrition—Protein Calorie Malnutrition (PCM) and Prevention—the U.G.C. and the British Council have approved a proposal of the S.N.D.T. Women's University for Academic Link Interchange Scheme (ALIS) between the S.N.D.T. Women's University and University of Edinburgh (U.K.).

The proposal envisages faculty exchange between the two Universities to develop teaching materials for use in training and evaluation of methods used to detect marginal malnutrition in children. This would be followed by realistic intervention programmes to reduce incidence of malnutrition in children.

The exchange programme will help to establish an academic collaboration in the area of Child Nutrition—Protein calorie Malnutrition Detection and Prevention—to help in research and teaching programme.

Dr. Donald S. Mclaren of University of Edinburgh who visited Bombay recently gave a series of lectures on:
(a) A fresh look at prenatal growth and nutritional standards; and (b) Progress towards the control of nutritional blindness.

National seminar on family resource management

A U.G.C. sponsored 'National
seminar in Family Resource
Management was held from
November 9-11, 1983, at S.V.T.
College of Home Science
Department of Family Re-
source Management, with a
view to help restructuring the
curriculum components of Fami-
ly Resource Management to
meet the changing social con-
ditions and demands of the
family and expectations of the
profession. Technical discussions
were focused on 'Managemen
of change, Housing, interior de-
signing and environment, edu-
cation for consumption science
and technology for better living

Jawaharlal Nehru University

The Vice-Chancellor of Jawa
harlal Nehru University, Dr
P.N. Srivastava, addressing
press conference recently dis
closed that construction of a
additional hostel would b
completed by July, 1985 as als
a Rs. 20-lakh Students Centr
building with a range of ameni
ties from a canteen to indoo
sports.

By the end of 1987 the uni
versity would be completel
shifted into its new campus va
cating the present campus.

The Housing Developmen
Finance Corporation would b
releasing Rs. 500 lakhs for th
purpose of construction of hou
ses within the campus. Thi
amount will be available in th

We regret to announce the
sad demise of Rajah Sir M.A.
Muthiah Chettiar, Pro-Chan-
cellor of Annamalai University.
He died of a heart attack on
12th May, 1984. He was 80.
Rajah Sir Muthiah Chettiar
was the son of the Founder
of Annamalai University, Sri
Annamalai Chettiar.

next five years. With the construction of these houses most of the lower level staff working in JNU would be given accommodation on the campus itself.

Two new Schools are proposed to be established—School for Physical Sciences and a School for Art and Aesthetics.

The new admission test for all programmes for entry into the JNU for the coming academic session will be held at 21 different centres set up all over India. The admission rules and regulations have been modified.

The intake this year would be between 700 to 800 students in the various programmes strictly on merit basis. 22.5% seats have been reserved for scheduled castes and scheduled tribes. Physically handicapped persons have a 3% quota.

New projects in science at Manipur University

Three new projects have been approved, two in Life Science department and one in Physics department. The two research and development projects in Life Science department are sponsored by the State Council of Science and Technology, Govt. of Manipur. One of them is entitled: "Detailed survey of the fish fauna of Manipur and study the culturable possibilities of certain indigenous fishes" under Dr. H. Tombi Singh, Associate Professor. The other one is on "Biosystematics of the aphids and their natural enemy complex of Manipur" under Dr. Kameshore Singh, Assistant Professor, Deptt. of Life Sciences.

The third project in Physics Deptt. is entitled "Study of electrical properties of semi conducting in thin films". It is under Dr. H. Nandakumar, Associate Professor in Physics.

The Life Science Department is also now undertaking six prestigeous projects from the Department of Environment, Govt. of India under the Himalayan Eco-Development Research Programme, an integrated Eco-Development Project for Himalayan Region, Ganga and western ghats.

Its co-ordinator is Dr. L. Janmejoy Singh, Associate Professor.

New courses and departments at Ravishankar University

The proposal to start the post-graduate Department of Geology in the VI Plan has been approved by the U.G.C. and has also been accepted by the State Government. The University has already made appointments of one professor, one reader and one lecturer. The department will have a building of 5000 sq. feet, equipment worth Rs. 2.5 lakhs and books and journals of Rs. 1 lakh. It will start functioning from the next academic session.

The Departments of Physics and Psychology have decided to offer M. Phil course from the next academic session. This will be a time bound programme and will be of one-year duration.

The Department of Physics will offer two job-oriented Diploma courses from the next academic session. The first is a post graduate Diploma course in Electronics. The second is a Diploma course in Photography. Both diploma courses will be of one year duration, and will be run in the evenings.

The Department of Bio-science will offer special paper on Cytogenetics to M.Sc. final students from the next academic session.

UGC Committee visits Gurukul Kangri Vishwavidyalaya

The Visiting Committee of the University Grants Commission which visited Gurukul Kangri Vishwavidyalaya in the month of March, 1984 has sanctioned special grants of Rs. 55 lacs for its various academic and capital programmes. Whereas the posts of four Professors in the departments of Ved, Sanskrit, Philosophy and Ancient History had already been sanctioned, the posts of 6 more Professors in the departments of Hindi, English, Psychology, Maths, Botany, Biology have also been sanctioned by the U.G C.

The most prominent feature of the Visiting Team's report is sanction for the establishment of the Lajpatrai Chair of the Indian Renaissance for integrated research in Social Sciences, History and Philosophy.

The U.G.C. has sanctioned Rs. 5 lacs for the extension of the library, Rs. 17 lacs for the Professors' Quarters, Rs. 5 lacs for the quarters of non-teaching staff, Rs. 1.5 lacs for medical facilities, etc. A few posts of Readers, lecturers and a curator have also been sanctioned.

The Visiting Committee was highly impressed by the Yoga course being run by the university and recommended an integrated approach between the Departments of Biology and Yoga and by the introduction and pursuance of English as a compulsory subject. The members of the Committee hoped that the Vedic message of India will be passed on to the world through English & other foreign languages, the collection of books and manuscripts in the library, and rich museum and archeological centre.

The Committee also recommended opening of M.Sc. classes in Micro-biology, adoption of the Gurukul for smaller children by the university and the development of Kanya Gurukul Mahavidyalya, Dehradun.

Computers for all engineering colleges

The Government of India, it is reported, has chalked out a plan to provide funds for all the engineering colleges in the country to buy a computer. The Central Government has also, it is reported, taken a decision to introduce 18-month post-diploma course in computer science in polytechnics. To begin with 16 polytechnics—4 each for the four regions coming under the All India Council for Technical Education will offer this diploma.

For the year 1984-85, an amount of Rs. 10.75 crores has been provided for the 15 Regional Engineering Colleges in the country, it was revealed. Rs. 8 crores of this towards non-recurring expenditure and the rest is for recurring expenditure.

Entrance test for admission to polytechnics in AP

A common entrance examination is proposed to be conducted for admission into polytechnics in Andhra Pradesh from the academic year 1984-85. A Government Order has been issued by the State Government in this behalf. The test is applicable for entrance to both government and private polytechnics in the State.

Candidates who have passed the 10th class examination or an equivalent examination and have secured 50% in the aggregate (excluding Hindi) are eligible to apply for admission to the test. In the case of Scheduled Castes and Scheduled Tribes students not less than 45% of aggregate marks should have been secured.

UGC recognises Kumaon and Garhwal Varsities

The University Grants Commission, it is reported, has accorded recognition to Kumaon (Nainital) and Garhwal (Srinagar, UP) Universities in the hill areas of Uttar Pradesh.

The State Government also, it is reported, has sanctioned a non-recurring grant of Rs. 30 lakhs as first instalment for the construction of the Arts Faculty to Kumaon University at Nainital.

Several posts of Professors and Readers have been created in Kumaon University. These are to be filled up in phases.

Capitation fee in medical colleges

The Union Minister of State for Health, Mrs. Mohsina Kidwai, giving information in the Rajya Sabha recently said in a written reply that seven medical colleges in Karnataka and one each in Punjab and Andhra Pradesh continue to charge capitation fee for admission. The fee ranged from Rs. 60,000 in Indian currency to $ 25,000 in foreign currency per seat.

Karnatak Varsity's library reading hours

The reading hours of the Library of Karnatak University will be from 8.00 am to 9.00 pm on Thuesdays, Sundays and Public Holidays and on other days from 8.00 am to 11.00 pm.

PG centre for Mahboobnagar likely

Answering a question in the State Assembly, the Minister for Education in Andhra Pradesh said that the State Government was examining a proposal for starting a Postgraduate Centre at Mahboobnagar. According to the Minister, the Government had received requests for opening PG centres at Chittoor and Vizianagaram in addition to Mahboobnagar.

Ten PG centres were being run currently in Andhra Pradesh by the Universities in addition to postgraduate courses in 13 affiliated colleges.

UGC sanctions 70 teachers posts for Calcutta University

The University Grants Commission, it is reported, has sanctioned 70 new posts of teachers for the Calcutta University. Of these 9 full time posts are for the Department of Modern Languages for Italian, French, Japanese, Spanish, Russian, German, Tibetan and Chinese classes. These posts are expected to be filled up in the next 5 months.

Pre-coaching facility for SC/ST students in Bihar

The State Government of Bihar is reported to have earmarked a sum of Rs. 72,000 in 1984-85 for providing pre-coaching facility to Scheduled Caste and Scheduled Tribe students for their admission into different engineering colleges, polytechnics and mining institutions.

Patna Varsity's budget of Rs. 9.58 crores approved

The Senate of the Patna University recently approved a budget of Rs. 9.58 crores for the year 1984-85. This amount represents an increase of Rs. 61 lakhs over the previous year's budget.

Book on University of Bombay released

Governor I.H. Latif released, recently at the Convocation Hall of the University of Bombay, a book entitled "The Cloister's Pale: A biography of the University of Bombay." The volume is the revised 125-year history of the University prepared as part of the post-Centenary Silver Jubilee celebrations of the university.

Coaching centre at Osmania Varsity

Osmania University has established a coaching centre to prepare its graduates for taking the competitive examinations for recruitment to I.A.S., I.P.S. I.F.S., Indian Economic Service Engineering Services, Reserv Bank of India and State Bank o India Probationary Officers anc Group-I Services of Andhr Pradesh Public Service Commission (APPSC).

This year the coaching will b offered for I.A.S. (Main) an Group-I Services (Preliminary) o A.P.P.S.C. examinations only.

The centre proposes to offe intensive coaching and guidanc with library facilities to the select ed candidates.

We regret to record the death of Dr. Avanash Chandra Chatterjee from a heart failure on May 5, 1984. Dr. A. C. Chatterjee (86) rose to be Professor and Head of the Department of Chemistry of Lucknow University. He was Vice-Chancellor of Gorakhpur University from 16-10-1961 to 2-3-1965.

Pharmacy degree course inaugurated at C.U. Shah College of Pharmacy

Dr. (Smt.) Lalita Rao, Minister for Public Health & Family Welfare, Medical Education and Drugs, Maharashtra State, inaugurated the Bachelor's Degree course in Pharmacy conducted at C.U. Shah College of Pharmacy, Bombay, of the S.N.D.T. Women's University, and also declared open the Science Building recently. She stressed the need for trained pharmacists to keep pace with the advances in medical sciences. Good pharmacists, she said, contributed to the betterment of community life.

Dr. (Smt.) Jyotiben Trivedi, Vice-Chancellor, S.N.D.T. Women's University, appealed to the industry to come forward to extend help in the future development of the college.

New Committees formed by Manipur University

A Publication Committee of the Manipur University was formed on March 14, 1984. Dr. I.R. Babu Singh, Associate Professor, Department of Manipuri Language and Literature has been appointed chairman and convenor of the Committee alongwith seven other members.

A 'Campus Beautification Committee' has been set up with Dr. L. Janmejoy Singh, Head, Deptt. of Life Sciences, as its chairman.

A team of teachers with Shri Tarinayya of the Deptt. of English as its Chairman, has been formed to review the latest books that arrived in the Library. The team is expected to issue a monthly bulletin for a better diffusion of information about the fresh arrivals in the Library.

An Examination Review Committee with Dr. Ghatak as its Chairman has been set-up to review the entire system of examinations in the University. The Committee is expected to suggest within two months the ways and means of making the system as efficient as possible.

UNIVERSITY OF HYDERABAD

Admission Notice 1984-85

Applications in the prescribed form are invited for admission to the following full time courses for the academic session 1984-85.

1. M.Sc. courses in Mathematics, Physics, Chemistry and Life Sciences (Biochemistry, Plant Sciences and Animal Sciences); duration: 2 years (4 semesters).
2. Master of Computer Applications (M.C.A.) (6 semester course).
3. M.A. courses in English, Hindi, Telugu, Urdu, Philosophy, Economics, History, Political Science and Sociology. Duration : 2 years (4 Semesters).
4. Diploma in Computer Applications (D.C.A.) (2 Semester post-graduate course).
5. M. Phil. courses in Mathematics, Physics, Chemistry, Life Sciences, Physics (Material Science), Physics (Modern Optics/Laser Physics), English, Hindi, Telugu, Urdu, Philosophy, Economics, History, Political Science and Sociology/Anthropology; Duration: One year (2 semesters).
6. M. Tech. in Computer Science (Three semester course).
7. Ph.D. in Mathematics, Physics, Chemistry, Life Sciences, Computer Sciences, English, Hindi, Telugu, Urdu, Philosophy, Economics, History, Political Science, and Sociology/Anthropology.

The eligibility requirements and other details for each course are given in the Admission Bulletin which may be obtained along with the application form from the Assistant Registrar (Academic), University of Hyderabad, Central University P.O., Hyderabad-500 134, on payment of Rs. 5/- per one set of form and one copy of the Bulletin, payable in person or by post by means of a crossed Indian Postal Order for Rs. 7/- drawn in favour of the Finance Officer, University of Hyderabad, payable at Hyderabad G.P.O. Local sale of application forms/Admission Bulletins at the University offices located in Golden Threshold, Nampally Station Road, Hyderabad-500 001, and the University Campus shall commence from **1st JUNE, 1984.** Candidates are advised to satisfy themselves about their eligibility before applying to a course. Separate applications are required for each course. Each additional application form will cost Re. 1/-. REQUESTS FOR SUPPLY OF APPLICATION FORMS BY POST SHOULD REACH THIS OFFICE ON OR BEFORE 8TH JUNE, 1984. THE POSTAL ORDERS SHOULD NOT BE DATED EARLIER THAN THE DATE OF NOTIFICATION.

15% of seats in each course are reserved for Scheduled Caste candidates and 7½% for Scheduled Tribe candidates. Relaxation of 5% marks in the minimum eligibility requirement will also be given to them. If seats reserved remain unfilled, further relaxation may also be given. 3% of seats in each course are reserved for physically handicapped candidates.

Admission is made in order of merit taking into consideration the past academic record of the candidates and their performance in a written test and/or oral test. Admission tests are scheduled to be held between 20-26th July, 1984 at Hyderabad. Candidates appearing for the admission tests may be paid second class railway fare by shortest route, for distances beyond 300 kms. (each way) on production of evidence of journey performed.

Hostel seats are very limited and only out-station students are eligible to apply.

Candidates who have appeared for the final examination of the qualifying degree and whose results are not declared by the time of the admission test are also eligible to apply. Their admissions to the tests and further consideration will be purely provisional.

Application form complete in all respects alongwith attested copies of marks sheets/certificates and self addressed envelope 23 cm. x 10 cm. bearing stamps worth Re. 0.75 p. and a crossed Indian Postal Order for Rs. 5/- as Registration fee (non-refundable) drawn in favour of the Finance Officer should reach the Assistant Registrar (Academic), University of Hyderabad, Central University P.O., Hyderabad-500 134 latest by **WEDNESDAY, 20th JUNE, 1984.** The University will not be responsible for any postal delays.

P.V. George
REGISTRAR

News from Agril. Varsities

Pantnagar's thrust on kharif research

In a bid to evaluate the performance of promising crop varieties and develop cereal, fruit and vegetable varieties suitable to its different agro-climatic zones, the Pantnagar University has planned to conduct a wide variety of trials this Kharif season at its main and out-station research centres at Majhera, Bulandshahar, Nagina, Daurala and Ranichauri.

Under the Pulse Improvement Programme, trials on early maturing Arhar Varieties UPAS 120, Pant A1, A10, T21, Pant A 102, Pant A 103, and Pant A 104 would be conducted at Bulandshahar, Nagina and Daurala stations to select out the best variety in respect of days to 50% flowering and maturity, plant height, reaction to diseases like sterility mosaic, stem blight and wilt, reaction to pod borer, yield and weight of the seeds.

To evaluate the performance of promising Ragi cultures in hill terraces, advance trials have been planned in an area of 360 sq. metres at Majhera, Ranichauri, Almora, Gwaldam and Chinnarisaur (Uttar Kashi) besides planning Co-ordinated Varietal as well as Advance trials at Majhera and Ranichauri under millet improvement project.

At Daurala, Nitrogen studies in early maturing maize varieties Tarun, Sweta, Navin and Kanchan have been proposed besides taking up a varietal evaluation trial in papaya to find out the best variety of papaya under agro-climatic conditions of western Uttar Pradesh. Agronomic trials on late planted sugarcane i.e. planting sugarcane after wheat harvesting will also be laid out at Daurala and Bulandshahar research centres.

News from UGC

Admission to law courses for the sessions 1984 and 1985

The University Grants Commission has written to all such universities where law courses are being taught that the Bar Council of India has decided that Universities and Law Colleges may admit students for the three year degree course in law after graduation for the sessions commencing (1984-85) and for the next year (1985-86) under the old rules and those students passing out will be eligible for enrolment as advocates. The U.G.C. in an earlier communication to the universities, had intimated that the matter regarding the introduction of five-year integrated course in law was under discussion with the Bar Council of India and the Government of India and the final decision on the subject would be communicated to them as and when taken. The Ministries of Law and Education, University Grants Commission and the Bar Council of India have recently held a series of meetings regarding the academic, financial and other implications of the proposed 5-year integrated course in law after 10+2. Since no final decision has so far been taken, the present arrangements will continue for the time being.

Sports News

Plan for sports festival approved by SAI

The Governing Body of the Sports Authority of India at its recent meeting approved, in principle, a proposal for organising National Sports Festival for juniors and sub-juniors in November this year. The National Festival would be preceded by similar fetes at district and state levels.

The Governing Body also approved the adoption of selected schools for provision of sports facilities and grant of scholarships to talented school children.

A sports promotion seminar is also to be shortly organised. Leading sports writers are to be invited for the seminar. This would be followed by similar meetings to which representatives of sports federations, educationists and outstanding sports people would be invited. These seminars and consultations are being organised with a view to arriving at a fruitful and realistic long range sports development plans. •

New field stations of NIS

Ten more universities will become field stations of the N.I.S. Patiala during the year 1984-85. The new stations are Gauhati University, Patna University, Gujarat University, University of Jammu, Himachal University, University of Rajasthan, Mangalore University, University of Madras, Utkal University and Bhopal University.

RECENT RELEASES FROM OXFORD & IBH

Books on Civil Engineering

Bhirud—Computer programming for science and engineering	Rs. 47.00
Madhava Rao—Modern trends in housing in developing countries	Rs. 165.00
Mukhopadhayay—Matrix, finite element, computer and structural analysis	Rs. 60.00 (approx.)
Sharma—A textbook of irrigation engineering and hydraulic structures	Rs. 75.50
Khushalani—Irrigation : Practice and design Vol I.	Rs. 33.00

Books on Agriculture

Arakeri/Donahue—Soil conservation and water management	Rs. 95.00
Bapna/Rao—Forecasting crop output	Rs. 60.00
Severnev (Ed)—Wear of agricultural machine parts	Rs. 125.00
Sokolenko (Ed)—Water salt regime of soils : modelling and management	Rs. 125.00
Srivastava (Ed)—Pulse production—constraints and opportunities	Rs. 175.00

Books on Botany

Saldanha—Plants of India	Rs. 150.00
Sivarajan—Introduction to principles of plant taxonomy	Rs. 15.50
Mahadevan—Growth regulators, microorganisms and diseased plants	Rs. 39.50

Books on Social Sciences

Ganguli—A pilgrimage to the Nagas	Rs. 175.00
Mehendiratta—University administration in India and USA	

Oxford & IBH Publishing Co.

66 Janpath
New Delhi 110001

Bombay

17 Park Street
Calcutta 700016

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Mohanty, Renupama. *ABO blood groups and fertility.* Utkal U, Bhubaneswar.

Biochemistry

1. Gangopadhyay, Tapan. *Physico-chemical studies of an immobilized multienzyme systems.* U Calcutta.

2. George, Shaji T. *Studies on aryl acylamidases and acetylcholinesterase.* U Madras.

3. Janardana Rao, Gurram. *Mycotoxicoses studies in plants.* U Madras.

Marine Biology

1. Abdul Rahim, S.V.M. *Studies on the formation, storage and transfer of spermatophores in the warm water squid* **Loligo duvacelid' Orbigny**.. U Madras.

2. Chetty, Sandhya Rani. *Studies on the developmental biology of common carps.* Ravishankar U, Raipur.

3. Gupta, Ashwini Kumar. *Survey and pathophysiology of economically important food fishes parasitized by trematodes and cestodes.* Ravishankar U, Raipur.

4. Niyogi, Aditi. *Biochemistry of caryophyllaeids and pathophysiology of host,* **Clarias batrachus**. Ravishankar U, Raipur.

Botany

1. Chandrabose, M. *Studies on the flora of Coimbatore and its environs.* U Madras.

2. Daljit Singh. *Studies on lactase producing fungi and their role in the degradation of lignocellulosic residues.* GNDU, Amritsar.

3. Dhawale, Nandkumar Madhav. *Studies on certain physiological aspects of legume seed development.* Meerut U.

4. Gajapathy, M.K. *Ecology of storage fungi in rice.* U Madras.

5. Gautam, Shishir Kumar *Taxonomic studies on some inoperculate Discomycetes.* BHU, Varanasi.

6. Gupta, Deepak Kumar. *Studies on the microbiological control of mosquito causing malaria.* HS Gour, Sagar.

7. Inderjit Kaur. *Studies on some aspects of ageing in banana fruitfly,* **Zapriomus paravittiger** (*Diptera: Drosophilidae*). GNDU, Amritsar.

8. Janardhanan, K. *Studies on seed development and germination in* **Mucuna utilis** *wall exwt.* (*Papilionaceae*). U Madras.

9. Jayalakshmi, R. *Embryological studies on some species of arachis,* U, Madras.

10. Kapoor, Anita. *In vitro studies on some Bryophytes.* U Delhi.

11. Khan, P.A. *Photoperiodism and the flowering process in winter rice of Orissa.* Berhampur U.

12. Maholay, M.N. *Studies on seed fungi of some important vegetables and their control.* Bangalore U.

13. *Mandal, Gopal Chandra. Mycoflora associated with oil yielding seeds in storage and biochemical changes involved during deterioration.* U Burdwan.

14. Maninder Kaur. *A comparative study of cellulases in trichoderma species.* GNDU, Amritsar.

15. Mishra, Jnyan Ranjan. *Studies on meiosis and sporogenesis in vitro.* Utkal U, Bhubaneswar.

16. Nageswara Rao, Gangisetty. *Studies on senescence with particular reference to hormonal regulation of different senescence patterns.* Meerut U.

17. Nandan, Suresh Narayan. *Algal flora of polluted waters of Gujarat state.* SPU, Vallabh Vidyanagar.

18. Padma, T.R. *Studies on antifungal activity in leaves of* **Panicum repens** L. *and compatibility with* **Pyricularia spp.** U Madras.

19. Ramamurthy, K. *Floristic studies on the vascular plants of South Arcot District, Tamil Nadu.* U Madras.

20. Rattan Kumar, Veerathu. *Cytogenetic studies on the intra-and inter-specific relationships between* **Solanum surattense** *and* **S. melongena.** Andhra U, Waltair.

21. Seethalakshmi, K.U. *Studies on colletotrichum fruit rot of chillies,* **Capsicum annum L.** *with special reference to cell wall degrading enzymes.* U Madras.

22. Singh, Rajendra Pratap. *Impact of bisulphite on* N_2 *fixing potential in the blue-green alga,* **Wostoc calcicola** *Breb.* BHU, Varanasi.

23. Singhvi, Narpat Raj. *Studies on the effect of bioregulants on* **Raphanus sativus L.** U Raj, Jaipur.

24. Sivasubramanian, V. *Growth and physiology of some marine diatoms in response to environmental factors* U Madras.

25. Subbalakshmi, Vedantham Venkata. *Cytogenetic studies on the interspecific relationships of* **Solanum incanum** *with six other spinous solanums.* Andhra U, Waltair.

26. Surinder Singh. *Studies on thermophilous fungi of Indian soils.* GNDU, Amritsar.

27. Tripathi, Anil Kumar. *Effects of mutagenic chemicals on nitrogen-fixing cyanobacteria.* BHU, Varanasi.

28. Yadav, Anrudha Singh. *Ecological study of some important forest tree seeds and their seedlings.* HS Gour, Sagar.

29. Yadav, Banwarilal. *Genus Ophioglossum in Rajasthan.* U Raj, Jaipur.

Zoology

1. Arun Kumar. *Bioecological studies on energetics of certain lepidopterous caterpillars in Western Uttar Pradesh.* Meerut U.

2. Balaraman, B. *Histochemical and biochemical studies on hydatids,* **Echinococcus granulosus** (Cestoda) *of different host origins (Sheep, Goat and Cattle) and incidence of infection in them.* U Madras.

3. Bharathi, N. *Studies on the glands associated with formation of byss threads in the marine bivalve* **Perna viridis Linnaeus, 1758,** U Madras.

4. Chellappa, S. Augustine. *Studies on the isoenzymes and proteins of Theraponoid fishes.* U Madras.

5. Ezhilarasi, S. *Biochemical investigations on the vitellogenesis of an edible crab* **Scylla Serrata (Forskal)** *(Decapoda: Portunidae).* U Madras.

6. Giri, Polavarapu Ratna. *Studies on the cuticular organization of* **Dermestes maculatus** *: An insect pest on leather with reference to factors responding to insecticide action together with observations on methods of control of the pest.* U Madras.

7. Gupta, Gopal Prasad. *Studies on life histories of* **Parallelotestil tarai,** *Srivastava,* 1958; **Patagifer parvispinosus,** *Yamaguti,* 1933; *and* **Nephrostomum ramosum** (*Sonsino* 1895), *Dietz* 1909 (*Trematoda: Echinostomatidae*). Ravishankar U, Raipur.

8. Gupta Meena. *Studies on thyroid and hypothalamohypophyseal thyroid interrelationship in Indian fresh water catfish,* **Heteropneustes fossilis Bloch.** Shivaji U, Kohlapur.

9. Jayanthi, R. *Tingidae of Southern India (Heteroptera): A study on their bioecology and biosystematics.* U Madras.

10. John, George. *Studies on the bioecological, histological, cytogenetic and electrophoretic aspects of* **Ptyelus nebulosus** *Walker and* **Colvia puncta** *Stal (Homoptera: Cercopidae).* U Madras.

11. Jyotika. *Lipid composition and metabolism in* **Haemonchus contortus** (Namatoda: Trichostrongylidae). PAU, Ludhiana.

12. Lal, Shiva Sagar. *Some fresh water Cercariae: A morphological and biochemical study.* Meerut U.

13. Mahant, Promila. *Correlative histochemical and biochemical study of denervation and regeneration changes in certain muscles of albino rat with special reference to m-AT pase and SDH.* U Delhi.

14. Majumdar, Srutakirti. *Studies on some aspects of the neurosecretory system of a diplopod,* **Trigoniulus lumbricinus,** *Grost.* U Calcutta.

15. Mishra, Rajeswar Prasad. *Studies on nematode parasites of some fresh water fishes.* Meerut U.

16. Moorty, Ravi Sreerama. *Studies on some aspects of hydrography and benthic macrofauna in the Gosthani and Champavathi estuaries on the east coast of India.* Andhra U, Waltair.

17. Munuswamy, N. *Aspects of reproductive biology of the fairy shrimp* **Streptocephalys dichotomus Baird** *(Crustacea: Anostraca).* U Madras.

18. Nadarajalingam, K. *Reproductive biology of two semiterrestrial ocypodid crabs,* **Ocypoda platytarsis** *H. Milne Edwards and* **Ocypoda macrocera** *H. Milne Edwards (Brachyura, Ocypodidae) with reference to the endocrine aspect of vitellogenesis.* U Madras.

19. Parashari, Aditya. *Toxicity of aflatoxin to* **Clarias batrachus Linn.** Meerut U.

20. Ramasamy, P. *Studies on monogeneans of a few families of marine teleosts; Population dynamics and enzyme associated with reproduction.* U Madras.

21. Ratha Bai, V. *Biology and biochemistry of* **Pallisentis nagpurensis** (*Bhalerao,* 1931) (*Gyracanthocephala: Eoacanthocephala*) *in the final host* **Channa striata Bloch.** U Madras.

22. Satya Gopal, Korlapati. *Studies on histology and histochemistry of the male reproductive system in some digenetic trematodes.* Andhra U, Waltair.

23. Sharma, Dharam Pal. *Studies on the morphohistology of digestive system and physiology of digestion in* **Helys dentatus Fabr** *(Heteroptera: Pentatomidae).* Meerut U.

24. Shivaji Rao. *Studies on major insect pests of Okra,* **Abelmoschus esculentus Moench** *with special reference to their chemical control.* Shivaji U, Kohlapur.

25. Singh, Vidhu Bhushan. *Seasonal metabolic strategies of birds.* BHU, Varanasi.

26. Singh, Vinod Kumar. *Role of steroidal hormones in annual gonad development cycle of male birds.* BHU, Varanasi.

27. Thangaraj, T. *Studies on monogenetic trematodes of marine fishes with reference to population dynamics and enzymes associated with reproduction and metabolism.* U Madras.

28. Tharapel, Sugandhi A. *Phenotype-karyotype correlation in patients trisomic for different segments of chromosome 13.* Bangalore U.

29. Yadava, Murli Ram. *Breeding biology of the Indian tropical pond turtle,* **Lissemys punctata granosa Schoepff.** BHU. Varanasi.

Medical Sciences

1. Anandamohan, N. *Biochemical studies in urolithiasis.* U Madras.

2. Bhanumathi, J. *Cytogenetic and flow cytometric studies on the effects of some antituberculosis drugs.* U Madras.

3. Das, Ashok Kumar. *Clinical and experimental studies on diabetic heart disease.* U Madras.

4. Goel, Raj Kumar. *Effect of vegetable banana on gastric secretion and ulceration: An experimental and clinical study.* BHU, Varanasi.

5. Jeyadas, T. *Mycotoxicoses: A study on the variations of blood constituents during Penicillium patulum toxicosis.* U Madras.

6. Leela, K. *Biochemical and histological studies in experimental diabetes controlled by the hypoglycemic extracts of* **Gymnema svlvestre R. Br.** U Madras.

7. Muthiah, R. *Studies on experimental lymphomas with special reference to radio-immunodetection and localization.* U Madras.

8. Pereira, Bon M.J. *Influence of thyroid on epididymis.* U Madras.

9. Rajagopalan, M.S. *The development, standardisation and application of passive bacterial agglutination for the detection of hepatitis B. virus surface antigen.* U Madras.

10. Ramamoorthy, P. *Metabolic and biochemical effects of steroidal contraceptive drugs.* U Madras.

11. Saigal, Suman. *Biochemical studies on pesticides.* Meerut U.

12. Siddiqui, Javed Zafar. *Biochemistry of a new bacteriopnage MB* 78. BHU, Varanasi.

13. Thomas, Minnic Marian. *Electromicroscopic investigations of the aetiology and pathogenesis of diarrhoeal diseases in Southern India.* U Madras.

14. Upadhyaya, Prabhu Nath. *Agadtantra ka kramik vikas.* BHU, Varanasi.

15. Vimla Rani, P. Geraldine Veronica. *Influence of thyroid on prostate and seminal vesicle.* U Madras.

16. Virmani, Arvind Kumar. *Investigations on plasma lipoproteins in atherosclerotic disease.* U Madras.

17. Vivekanandan, S. *Hormonal and biochemical aspects of human tumors.* U Madras.

18. Yeshowardhan. *Serum enzymes and isoenzymes estimation in malignancies.* Meerut U.

Agriculture

1. Agarwal, Harihar Prasad. *Studies on the effect of copper and zinc application on paddy.* BHU, Varanasi.

2. Arjan Singh. *Influence of some edaphic factors on transport of sulphate ions to plants roots in soils.* Pb U, Chandigarh.

3. Balister Singh. *Studies on the chemical weed control in chillies,* **Capsicum annum L.** BHU, Varanasi.

4. Bhattacharya, Somnath. *Influence of juvenile hormone analogues on the growth and development of tobacco caterpillar,* **Spodoptera litura Fab.** PAU, Ludhiana.

5. Chakraborty, Udayan. *Studies on vegetative propagation of mango,* **Mangifera indica L.** *by epicotile grafting.* U Calcutta.

6. Chaudhuri, Sulekha. *Studies on the microbial production of methionine.* U Calcutta.

7. Chhotey Singh. *Cultural studies on 'Bhindi',* **Abelmoschus esculentus (L) Moench.** Meerut U.

8. Das, Jatindra Nath. *The effect of gibberellic acid and some other plant hormones on the growth, yield and quality of some fodder crops.* U Delhi.

9. Jandial, Kuldip Chander. *Agronomic studies on seed setting in cauliflower,* **Brassica oleracea** *var, botrytis.* HS Gour, Sagar.

10. Kulkarni, Sudhakar Nagorao. *Studies on cotton pest complex in relation to crop losses and control.* Marath Krishi, Parbhani.

11. Lakhraj Singh. *Response of mustard,* **Brassica juncea L** *to nitrogen levels under varying spacings at different planting dates.* Meerut U.

12. Mahak Singh. *Studies on nitrogen economy and uptake pattern in dwarf wheat grown after common kharif crops, legumes and cereals* Meerut U.

13. Mahal, Gursharan Singh. *Genetical analysis of yield and other traits involving diverse populations of durum wheat,* **T. durum Desf.** PAU, Ludhiana.

14. Maheshinder Singh. *Studies on the factors affecting granulation in citrus.* PAU, Ludhiana.

15. Naik, D.S. *Release of some trace elements in fly-ash amended soil and their uptake by selected plants.* JNU, New Delhi.

16. Patil, Jagdish Devidasrao. *Nutritional studies in Daulatabad fig, Ficus carica L.* Marath Krishi, Parbhani

17. Sastry, E.V. Divakara. *Inheritance of dwarfism in wheat and effect of different dwarfing genes on genetic parameters and productivity.* BHU, Varanasi.

18. Saxena, Mridula. *Studies on characteristics of rhizobial isolates and suitability of carriers for rhizobial inoculants.* BHU, Varanasi.

19. Sheo Achal. *Effect of nitrogen and gibberellic acid on vegetative growth and physico-chemical composition of cabbage,* **Brassica oleracea** *L. var. capitata.* BHU, Varanasi.

20. Singh, Ram Bahadur. *Studies on sclerotinia wilt and rot of gram,* **Cicer arietinum L.** BHU, Varanasi.

21. Singh, Ravindra Narayan. *Studies on interactions of nitrogen, phosphorus and zinc in wheat crop.* BHU, Varanasi.

22. Thonte, Gurunath Trimbakappa. 1. *Effect of various horticultural practices on the yield and quality of FIG,* **Ficus carica L.,** 2. *Effect of various growth regulators of the ripening and quality of FIG,* **Ficus carica L.,** and 3. *Studies on drying and dehydration of FIG, fruits* **Ficus carica L.** Marath Krishi, Parbhani.

Veterinary Science

1. Rajinder Singh. *Use of nitrogen rich wastes in poultry diets.* PAU, Ludhiana.

2. Surinder Kumar. *Effects of different levels of common salt (NaCl) in the chick ration on feed efficiency and nutrient utilization with specific reference to phosphorus metabolism.* PAU, Ludhiana.

CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in AIU Library during April, 1984.

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Ray, Sunil Baran. Value system, education and economic development. *J Indian Edn* 9(3), 1983, 17-20.

Touraine, Alain. Decline or transformation of the universities? *J Hr Edn* (Delhi) 8(1), 1982, 1-8.

EDUCATIONAL PSYCHOLOGY

Gupta, Sushil Prakash. Personality needs and students teaching competency. *The Progress of Edn* 58(9), Apr 84, 210-12.

Wilson, Brian. Problems of university adjustment experienced by undergraduates in a developing country. *Hr Edn* 13(1), Feb 84, 1-22.

EDUCATIONAL SOCIOLOGY

Basu, Asoke. Politics of academics: A comparative review. *J Hr Edn* (Delhi) 7(1-2), 1981, 59-72.

Conlisk, John. Four invalid propositions about equalty, efficiency and intergenerational transfers through schooling. *J Human Resources* 19(1), 1984, 3-21.

Punekar, Vijaya B. Communication in ragging. *J Hr Edn* (Delhi) 7(1-2), 1981, 145-54.

EDUCATIONAL ADMINISTRATION

Allen, Carl. Student recruitment and admissions. *New Directions Hr Edn* (42), 1983, 33-9.

Cameron, Kim S. Organizational adaptation and higher education. *J Hr Edn* (Ohio) 55(2), 1984, 122-144.

Darji, D.R. and Sharma D,K. Decision making and faculty participation. *J Hr Edn* (Delhi) 7(3), 1982, 266-72.

Kempner, Thomas. Playing the university game. *THES* (600), May 4, 84. 16.

Padmanabhan, C.B. An approach to financial management in education with special reference to colleges in India. *J Hr Edn* (Delhi) 7(3), 1982, 293-7.

Simmons, Adele. Organizing and staffing a small college. *New Directions Hr Edn* (42), 1983, 59-64.

CURRICULUM

Ediger, Marlow. The literature curriculum. *The Progress of Edn* 58(9), Apr 84, 202-7.

Shankar Narayan, D. Computer science and technology: Facility requirements and certification of academic programmes. *J Hr Edn* (Delhi) 7(3), 1982, 324-26.

Zammuto, Raymond F. Are the liberal arts an endangered species? *J Hr Edn* (Ohio) 55(2), 1984, 184-211.

TEACHING

Channon, Lorna D. and Walker, Wendy-Louise. A note on teaching larger 'small' groups. *Studies in Hr Edn* 9(1), 1984, 83-6.

Sinha, Rita. Team teaching: A new dimension in the teaching-learning process. *J Indian Edn* 9(3), 1983, 1-7.

EDUCATIONAL TECHNOLOGY

Andrews, Larry K. Evaluating educational technology: The law of the hammer. *Change* 16(2), 1984. 5-6.

Da Costa Gomes, Candido Alberto. Organizational constraints to technical innovation in education. *J Indian Edn* 9(3), 1983, 53-60.

EVALUATION

Aiken, Lewis R. Determining grade boundaries on classroom tests. *Ednl Psy Measurement* 43(3), 1983 , 759-62.

Broadfoot, Patricia. International trends in educational assessment. *J Hr Edn* (Delhi), 7(3), 1982, 227-35.

Hassan, Parveen Akhtar. Attitude of teachers and students towards the semester system. *Indian Ednl Rev* 18(4), 1983, 116-22.

Hofman, John E. and Kremer, Liya. Course evaluation and attitudes toward college teaching. *Hr Edn* 12(6), 1983, 681-90.

Linn, Robert L. Selection bias: Multiple meanings. *J Edn Measurement* 21(1), 1984, 33-47.

Liu, Richard and Sanders, Jack. Selection of models in 2x2x2 contingency tables. *Res Hr Edn* 20(1), 1984, 17-21.

Masters, Geofferey N. Constructing an item bank using partial credit scoring. *J Edn Measurement* 21(1), 1984, 19-32.

Millman, Jason and others. Does grade inflation affect the reliability of grades? *Res Hr Edn* 19(4), 1983, 423-29.

Miller, Allen H. The evaluation of university courses. *Studies in Hr Edn* 9(1), 1984, 1-15.

O'Neill, Joseph P. Examinations and quality control. *New Directions Hr Edn* (43), 1983, 69-79.

Verma, Lokesh K. Attitude of university examiners in arts and science subjects towards spot evaluation. *J Hr Edn* (Delhi) 7(3), 1982, 286-8.

ECONOMICS OF EDUCATION

Akangbou, Stephen D. Towards a programme budgeting approach for education in Nigeria. *Manpower J* 17(3), 1981, 1-31.

Bhatt, G.K. Profitability of private investment in higher education in Rajasthan. *J Hr Edn* (Delhi) 8(1), 1982, 85-9.

Hussain, M.A. The role of education in economic development in India: An explanatory analysis. *Indian Ednl Rev* 18(4), 1983, 15-27.

O'Leary, John. Institutes drain India's resources. *THES* (587), Feb 3, 1984, 12.

COMPARATIVE EDUCATION AND COUNTRY STUDIES

Basu, Janet Else. Berkeley and Stanford: The etiquette of gentlemanly competition. *Change* 16(2), 1984, 32-7, 44.

Bloom, Leonard and Woodhouse, Howard. Providing answers without questions. *THES* (592), Mar 9, 1984, 10.

O'Neill, Arthur. Control and supervision of Australian higher education. *Hr Edn Rev* 16(1), 1983, 25-35.

Rais Ahmed. Universities: Perspectives and problems. *J Hr Edn* (Delhi) 7(3), 1982, 177-87.

UNIVERSITY OF DELHI

Advertisement No. Estab. IV/88/84 **Dated the 7th May, 1984**

Applications on prescribed form are invited for the following posts:—

Departments	Designation
1 Hindi	One Professor.
2 Modern European Languages	(i) One Reader in Italian. (ii) One Lecturer in Italian. (iii) Junior Assistant-cum-Typist (one each in French and German).
3. Education	(i) Two Lecturers. (ii) Audio-Visual Assistant.
4. Management Studies	Seven Lecturers (One Temp. upto 25-1-86)
5. Chemistry	Six Lecturers
6. Anthropology	One Lecturer
7. History	Two Lecturers
8. Mathematics	One Lecturer
9. Computer Science	Three Lecturers
10. Geography	Two Lecturers
11. Modern Indian Languages	One Lecturer in Bengali
12. Sanskrit	One Lecturer (Temp. upto 8-1-86)
13. Persian	Two Lecturers (Temp. upto 31-3-85)
14. Delhi Univ. Sports Council	Asstt. Director, Physical Education (female)
15. W.U.S. Health Centre	(i) Two Technical Assistants (one reserved for Scheduled Castes) (ii) One X-Ray Technical (Part-time)
16. Music	One Sarangi Accompanist.
17. Geology	One Laboratory Attendant (Reserved for Scheduled Tribe).

The Scale of the Pay of the posts are:

Professor	Rs. 1500-60-1800-100-2000-125/2-2500.
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Lecturer/Asstt. Director Phy. Education	Rs. 700-40-1100-50-1600.
Technical Assistant	Rs. 425-15-500-EB-15-560-EB-20-700.
Sarangi Accompanist	Rs. 330-10-380-EB-12-500-EB-15-560.
Audio Visual Assistant	Rs. 330-8-370-10-400-EB-10-480.
Junior Assistant-cum-Typist	Rs. 260-6-290-EB-6-326-8-366-EB-8-390-10-400.
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All posts, except that of Part-time X-Ray Technician, carry D.A., C.C.A. and H.R.A. as admissible under the rules in force in the University from time to time.

Essential Qualifications for :

Professorships

An eminent scholar with published work of high quality actively engaged in research. Ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Readership

Good academic record with at least second class Master's degree in a relevant subject with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) Research, or (ii) innovation in teaching methods or (iii) production of teaching materials.

Five years' experience of teaching in under-graduate/postgraduate classes and/or post-doctoral research work with evidence of published work.

Note: Second Class would mean at least 50% marks in the subject or equivalent grade.

Lectureship

(Other than Foreign Language (Italian), Management Studies & Education).

(a) A Doctorate's degree or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increment until he fulfils these requirements.

Lectureship in Italian

(a) A Doctor's degree or research work of an equally high standard; and

(b) Good academic record with atleast second class (C in the seven point scale) Master's degree from an Indian University, or an equivalent degree from a foreign University. Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the Research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a good academic record may be appointed provided he has done one year post M.A. diploma course in the teaching of foreign language concerned from a university on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within 8 years of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

Lectureship in Education

(a) A Doctor's degree in Education or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent Degree from a foreign University.

OR

(a) A Doctor's degree in any university discipline or research work of an equally high standard; and

(b) Good academic record with an M. Phil. degree in Education (which may be acquired while in service) from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, one of the degree in (a) and (b) above may be in relevant subjects, the other being in Education.

Provided that if the Selection Committee is of the view that the Research Work of a candidate as evident either from his thesis or from his published work is of very high standard it may relax any of the qualification prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least 2 years or has practical experience in research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within eight years of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

Note: For determining "good academic record" the following criteria shall be adopted.

(i) A candiate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

Persons having secured marks more than the mid point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a university shall be deemed to have passed that examination in the high second class.

Lectureship in Management Studies

A Master's degree in Business Administration or M. Tech. in Engineering with first class with the provision that the incumbent would acquire a doctorate degree within a period of eight years.

In the case of allied subjects like Industrial Psychology, Personnel Management, Business Statistics, Cost Accountancy etc. where Lecturers are required to be recruited with qualifications other than M.B.A. or M. Tech. the minimum qualification shall be the same as prescribed for the Faculties of Arts, Social Sciences including Commerce and Sciences.

Assistant Director Physical Education (Female)

(i) A Master's degree in Physical Education (High Second Class) with diploma in sports coaching from a recognised Institution.

OR

A Master's degree in Physical Education (High Second Class) with a record of having represented his University at the inter-University level/state in the National Championship.

(ii) Experience in Organising games and sports (as exemplified in handling of about half a dozen teams in a year in his institution and their participation in University/Inter-Collegiate Tournaments) and ability to encourage mass participation in games and sports.

Technical Assistant

Matric or Higher Secondary with science Certificate or Diploma in Medical Laboratory. Technician Course with five years experience in Pathology, Bacteriology, Bio-Chemistry and Seriology. Science Graduate preferred. In their cases three years experience only will be preferred.

Sarangi Accompanist

(i) Sound knowledge of Music.

(ii) Competence in playing Hindustani Music & Sarangi with particular reference to the accompaniment aspect.

(iii) Proficiency in Classical and light Classical Music.

Junior Assistant-cum-Typist (French/German)

Matriculation with minimum speed of 25 w.p.m. in typewriting in the **Language concerned.**

Note: Candidates will be required to appear and qualify the prescribed tests in General English, language concerned, and typewriting in the relevant language to be conducted by the University.

Audio Visual Assistant

1. Matriculations
2. Licence Certificate to operate Cinematography equipment in Delhi Cinematography Rules.

Laboratory Attendant

Should have passed Matriculation or an equivalent examination with Science subjects.

Note: Though the post is reserved for Scheduled Tribe candidates, general category of candidates could also apply. However, their candidature would be considered only if no suitable candidate belonging to Scheduled Tribe category is found suitable.

X-Ray Technician (Part-time)

Graduate with Diploma in Radiography—two years experience as Radiographer in a general Hospital.

Special Desirable Qualifications :

Lecturer in Education (1st Post)

(i) M.Sc. (Botany)/Life Sciences.

(ii) M.Ed.

(iii) Atleast 3 years teaching experience in a training College or in a Secondary School.

(iv) M. Phil/Ph.D. in Education.

Lecturer in Education (Sanskrit) (2nd Post)

(i) First or high second Class Master's degree in Sanskrit.

(ii) Doctor's degree or evidence of research work or equivalent standard in Education/Sanskrit Education.

(iii) Experience of teaching Sanskrit in the Departments of Education or the Post-graduate Classes in training Colleges or Senior Secondary School Classes.

Lectureship in Management Studies

The specialization area-wise as under:

Two Posts in Personnel Management

Of this one of the two persons should have basic experience and demonstrated ability of teaching personnel Management and related behavioural aspects. The other person should have requisite experience or an evidence of having requisite knowledge of labour legislation in India.

One Post in MIS & Computers

Master's in Computer Science would be preferable with necessary inputs at Master's level in the area of Quantitative Methods or Masters in Business Administration with specialization in MIS and Computer or with requisite training and experience of Computer applications in Business decisions.

One Post in Quantitative Methods

MBA with specialization in Quantitative Methods or a person having a degree of Operations Research or applied Mathematics relevant to management decision-making.

One Post in Marketing Management

MBA with his major in Marketing Management or a person from Industry having a Master's degree in any of the Social Sciences but having a requisite marketing experience specially in the area of Marketing Research and Advertising Management.

One Post in Materials Management

A Master's degree in Engineering will be preferred with special aptitude and experience in the area of Materials and Maintenance Management.

One temporary post in Marketing Management/General Management

Lectureship in Chemistry

Two Posts in Inorganic Chemistry

The candidates should be conversant with modern aspects of the subject.

Two Posts in Organic Chemistry

Reaction mechanism, synthetic organic chemistry, biosynthesis, bioorganic chemistry/chemistry of natural products/physical organic chemistry.

Two posts in Physical Chemistry

Kinetics, Solid State Chemistry, Statistical Mechanics/Theoretical chemistry, Physical chemistry of Macromolecules, Photo & Radiation chemistry, Chemical crystallography, Electrochemistry.

Lectureship in Anthropology

Specialization in any field of Social Anthropology.

Lectureship in History

(i) Medieval Indian History (1st post)

(ii) Medieval Asian (other than Indian) History (2nd post).

Lectureship in Mathematics

Probability Theory.

Assistant Director, Physical Education (Female)

Besides being an outstanding sportswoman of her times, the candidate should have a demonstrated ability to organise Inter-College and Inter-Varsity Tournaments for a sufficient number of years.

Lectureship in Bengali (Modern Indian Languages Deptt.)

Knowledge of Sanskrit and/or knowledge or experience in language teaching.

Junior Assistant-cum-typist (French/German)

1. Advance Diploma or equivalent examination recognised by Delhi University in the language concerned.
2. Some experience of handling books in foreign languages particularly in the language concerned/office work.
3. Preference will be given to those candidates who have good knowledge of English typewriting.

Audio Visual Assistant

Some training in the use of Audio-Visual equipment.

Laboratory Attendant

Should have worked in a Laboratory.

The prescribed application forms can be had from the Information Section of the University either personally or by sending a self-addressed envelope (size 13 cm × 28 cm.) with postage stamps worth Rs. 3.45 P.

The candidates will have to produce the original documents relating to their age, qualifications, experience etc. at the time of interview.

Applications (separate for each post) accompanied by attested copies of Degrees, other certificates, marksheets, published research articles, etc. should be addressed to the Registrar. The last date prescribed for receipt of the applications is **7-6-1984**.

Note

1. It will be open to the University to consider the names of suitable candidates for teaching posts who may not have applied. Relaxation of any of the qualifications may be made in exceptional cases, in respect of all teaching posts on the recommendations of the Selection Committee.
2. Canvassing in any form by or on behalf of the candidates will disqualify.
3. Candidates from outside Delhi, for teaching posts only, called for interview will be paid to and fro single second class rail fare.
4. The University reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant.

Madan Mohan
REGISTRAR

G.H.G. KHALSA COLLEGE OF PHARMACY

GURUSAR SADHAR (LUDHIANA)
PUNJAB

Dated : May 14, 1984.

WANTED

Head, Deptt. of Pharmacy : M. Pharm with 5 years experience in the scale of Rs. 1200-1800.

Lecturer : M. Pharm. or B. Pharm. with 3 years experience in the scale of Rs. 850-1700.

Jr. Lecturer in Pharmacognosy : M. Pharm or B. Pharm. with 3 years experience in the scale of Rs. 700-1200.

Retired persons and those who are appearing/have appeared in examinations this year also eligible. Higher start also possible.

The college is situated in the close viccinity of IAF Station, Halwara at a distance of 25 K.Ms from Ludhiana. It has been started under the aegis of G.H.G. Khalsa College, Gurusar Sadhar, a Multi-faculty & Post Graduate residential Institution of Higher learning affiliated with Panjab University, Chandigarh.

The foundation stone of the building housing College of Pharmacy was laid by Dr. V.V. Giri Former President of India.

Apply Secretary by **June 10, 1984.**

Manjit Singh Khattra
PRINCIPAL

ZAKIR HUSAIN COLLEGE, UNIVERSITY OF DELHI

AJMERI GATE, DELHI-110006
No. ZHC/Advt./2/84-85

Applications are invited for the posts described below:

(A)		Lecturers in:		
	(1)	Mathematics	2	(One permanent & one part-time)
	(2)	Zoology	1	(Permanent)
	(3)	Urdu	1	(Permanent)
	(4)	Philosophy	1	(Leave vacancy for about 1½ years)
	(5)	Hindi	1	(Leave vacancy for about 1½ years)
	(6)	Pol. Science	1	(Leave vacancy upto 31-1-1985)
(B)	(7)	Junior Assistant-cum-Typist	1	(Permanent)
(C)	(8)	Junior Accounts Assistant.	1	(Permanent)
(D)	(9)	Lab. Attendants	2	or 3 (Temporary likely to continue)
(E)	(10)	Library Attendants	1	or 2 (Permanent)

The posts under category (A) are in the scale of Rs. 700-1600, under category (B) & (C) in the scale of Rs. 260-400 and under category (D) in the scale of Rs. 210-270. All posts carry usual allowances admissible under University rules.

Qualifications for (A)

Good academic record with a first or high second class Master's Degree or an equivalent degree of a foreign University in the subject concerned.

Note: Second class would mean atleast 50% marks in the subject or equivalent grade.

Desirable : (In order of preference):

(1) A Doctor's Degree or evidence of research work in the subject.

(2) Teaching experience of Degree/Post-graduate classes.

Qualifications for (B)

Graduate with typing speed of 40 w.p.m.

Desirable

Experience of office work, store keeping.

Qualifications for (C)

Graduate (Commerce) with knowledge of budgeting and accounts keeping.

Desirable

Proficiency in typing.

Qualifications for (D)

Should have passed Matriculation or equivalent Examination with Science.

Desirable

Experience of work in laboratory/Science Store/Typing.

Qualifications for (E)

Should have passed Matriculation or equivalent Examination with Arts/Science.

Desirable

Experience of work in library/Typing/Certificate or Diploma of IIT.

Candidates under Category (A) may obtain prescribed form of application by sending a self-addressed stamped envelopes or collect it personally from the college office. Candidates under Category (B), (C), (D) & (E) may send their applications on plain papers. Applications supported by attested copies of certificates and testimonials may be submitted in the college office latest by **May 31, 1984.**

BANARAS HINDU UNIVERSITY

(Advertisement No. 1/1984-85)

Applications are invited for the undermentioned posts. The benefit of Provident Fund, Pension, Dearness Allowance, House Rent Allowance and City Compensatory Allowances are admissible according to University rules. The retirement age of University Employees is 60 years. The appointment will be made on one year probation on all permanent posts. Higher starting salary within the grade is admissible to specially qualified and experienced candidates.

Applications will be entertained on the prescribed form duly supported with a Bank Draft or Crossed Indian Postal Orders of Rs. 7.50 (of Rs. 2.00 for the candidates belonging to Scheduled Caste/Scheduled Tribes category) in favour of the Registrar, Banaras Hindu University towards the application fee. Application forms and detailed qualifications will be supplied free of cost by the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221005 on receipt of Re. 0.90 paise stamped self-addressed envelope of 23cm× 10cm size. Candidates called for interview for these posts will be paid actual Railway fare by the Second Class plus reservation charges for sleeper, if paid, and/or actual Bus fare from the present residence both ways by the shortest route as per University rules. No other expenses will be paid.

Applications for each post be sent separately alongwith attested copies of certificates and marksheets in support of the qualifications and experience mentioned in the application and be addressed to the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221005.

Incomplete application in any respect will not be entertained for consideration. Those who are in service should apply through proper channel. M.O. or Cheque will not be accepted towards application fee.

Reservation : A reservation of 15% in the case of Scheduled Castes and 7½% in the case of Scheduled Tribes will be made in the category of teaching posts upto the level of Lecturers only.

The last date for receipt of applications in the Office of the Registrar (Selection Committee Section), Banaras Hindu University either by post or by hand will be **20th June, 1984** No applications shall be entertained after the last date from external, in-service employees and the candidates residing abroad.

Note

1. Number of vacancies are tentative and can vary according to needs.
2. Panel may be drawn for temporary appointment of Lecturers against future vacancies.

Grade

PROFESSOR : Rs. 1500-60-1800-100-2000-125/2-2500.

READER : Rs. 1200-50-1300-60-1900.

LECTURER : Rs. 700-40-1100-50-1600.

N.P.A. admissible to Medical Graduates for the posts in the Institute of Medical Sciences only.

INSTITUTE OF MEDICAL SCIENCES

1. **Professor of Radiotherapy & Radiation Medicine** (One)
2. **Reader in Radiotherapy & Radiation Medicine** (One)
3. **Lecturer in Forensic Medicine** (One)
4. **Lecturer in Forensic Immunology** (One)
5. **Lecturer in Pharmacy** (One) (Dept. of Pharmacology)

FACULTY OF SCIENCE

6. **Lecturer in Chemistry** (Physical) (One).

The Institute of Mathematical Sciences

Madras-600 113

Applications are invited for the post of REGISTRAR, Institute of Mathematical Sciences, Madras. Qualifications, scale of pay and other particulars are given below:

The Institute is looking for an officer with high academic qualifications and with overall knowledge of finance management, accounts and establishments and who has handled similar administrative duties earlier in scientific or academic institutions. Interest in science and competence to handle highly responsible and critical administrative assignments are important requirements. Familiarity with modern administrative practices especially with the use of computers in administration and accounts, would be an additional qualification.

Applicants should preferably be less than 50 years in age. He will be entitled to a pay scale of Rs. 1200-50-1300-60-1900 plus allowances and other service benefits admissible under the rules of the Institute. The starting salary of the selected candidate would be fixed at an appropriate level based on his qualifications and experience.

This is the senior-most administrative position under the Director/Joint Director of the Institute. The main role of the administration in the Institute is to provide the support which is needed by the Scientists in their academic activities. The Registrar has to provide the necessary leadership so that his aim is achieved through the smooth functioning of the administrative staff and the services.

Applications on plain paper giving date of birth, academic qualifications, etc. together with copies of certificates and superscribed on the left hand top corner of the envelope 'Application for the post of Registrar' should reach the Joint Director on or before **31st May, 1984**.

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University News

JUNE 1, 1984

Re. 1.00

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Some of the Vice-Chancellors at their two-day Conference held at New Delhi on May 21-22, 1984.

CLASSIFIED ADVERTISEMENTS

SHRI GURU GOBIND SINGHJI COLLEGE OF ENGINEERING & TECHNOLOGY

NANDED: 431 602

(With Cent Percent Grant-in-aid from Government of Maharashtra).

Applications are invited for the undermentioned posts on plain paper giving details such as address, age, date of birth, qualification, experience, salary drawn and expected so as to reach the Principal, Shri Guru Gobind Singhji College of Engineering & Technology, Nanded : 431602 within 15 days from the date of publication of the advertisement.

Sr. No.	Name of Post		Number of Posts.
(1)	**Professors :**	Electronics	(2)
		Instrumentation	(1)
		Computer Technology	(1)
		Production Engineering	(1)
		Water Management	(1)
(2)	**Assistant Professors :**	Applied Mechanics	(2)
		Water Management	(1)
		Electrical Engineering	(1)
		Production Engineering	(1)
		Electronics	(2)
		Instrumentation	(3)
		Computer Technology	(3)
(3)	**Lecturers :**	Physics	(1)
		Material Science	(1)
		Applied Mechanics	(1)
		Water Management	(1)
		Electrical Engineering	(3)
		Production Engineering	(2)
		Electronics	(5)
		Instrumentation	(4)
		Computer Technology	(5)

Pay Scale

(1) **Professors :** 1500-2500.

(2) **Assistant Professors :** 1200-1900.

(3) **Lecturers :** 700-1600.

Plus allowances admissible as per Government rules.

Maximum Age Limit

Post-1 : 45 years.
Post-2 : 40 years.
Post-3 : 35 years.

Relaxable by 5 years in the case of Backward Class candidates. 24% posts are reserved for Scheduled Caste, Scheduled Tribe, Denotified Tribes and Nomadic Tribes candidates.

Minimum Qualifications

(1) **Professors :** An eminent scholar with published work of high quality, actively engaged in research. Ten years experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding Engineer/Technologist with established reputation who has made significant contribution to knowledge.

(2) **Assistant Professors :** Good academic record with a Doctors Degree in the relevant field. About 5 years experience of teaching and/or research and development. Provided further that candidates not possessing Ph.D. may be considered if they have to their credit equivalent research published work or design/development work of high order either in the institution or in an industry.

OR

In the case of persons to be recruited from industry or professional field, candidate should possess good academic record with recognised professional work of about 7 years which would include innovation and/or research and development.

(3) **Lecturers :** (a) Masters Degree in appropriate field in Engineering/Technology. (b) Consistently good academic record with a Bachelors degree in Engineering/Technology. First class at Bachelor's degree and/or Master's Degree level. (c) One year relevant professional experience outside academic research institutions.

Having regard to the requirements of emerging fields of Engineering and developing interdisciplinary programmes the requirement of Engineering/Technology degrees may be waived in the case of otherwise well qualified candidates. Provided further that if a candidate does not possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of five years of his appointment failing which he will not be able to earn future increments, until he fulfils these requirements.

The appointments will be subject to the terms and conditions of service to be prescribed by the Shri Guru Gobind Shinghji College of Engineering & Technology, Nanded.

The candidates will have to attend the interviews at their own cost.

(a) Persons who are already employed shall send their applications through proper channel.
(b) Persons shall account for breaks, if any, in their academic career.
(c) Fresh graduates and Post graduates in Engineering may also be considered for appointment as Lecturers; if persons with prescribed qualifications are not available.
(d) The institution will be undertaking consultancy assignments which the faculty members are permitted to join.

CALCUTTA UNIVERSITY

Addenda/Corrigenda to the advertisement issued in the University News dated May 16, 19.4, inviting applications for the posts of Professors/Readers/Lecturers for different departments of this University.

1. The words "and (iii) for Lecturers—5 years" under clause II(d) be treated as deleted.
2. The condition regarding 15 years' and 10 years' experience for Professors and Readers respectively under the same heading (i.e. II(d)) is relaxable on the recommendation of the relevant Selection Committee.
3. In the case of all posts under the Centre for South and South-East Asian Studies—relevant disciplines are Economics, Geography, History, Political Science and Sociology.
4. Under "additional information etc." relating to Science and Technology.
   (i) The words 'Physical/Applied Anthropology' against Anthropology—for Lecturers—be treated as deleted. This may be read as Nos. 3 and 4 under "Anthropology.—for Readers.
   (ii) Desirable specialisation shown against Applied Mathematics relates to the post of S.N. Bose Professor of Theoretical Physics only.
5. Previous advertisements for any of the posts mentioned in this advertisement and applications in response thereto remain valid.
6. The last date for receiving completed applications in the prescribed forms is **8th June, 1984** and **15th June 1984** for those applying from abroad.

UNIVERSITY NEWS

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Editor :
M.S. RAMAMURTHY

On the Conference of Vice-Chancellors

A Conference of Vice-Chancellors is no doubt an event of significance. That over 100 of them braved the over 43°C temperature at New Delhi and discussed and deliberated on May 21 and 22, 1984 is indicative of the importance attached to the themes selected for discussions by the Vice-Chancellors.

Convened jointly by the Union Ministry of Education & Culture and the University Grants Commission the agenda for the conference comprised consideration of the following: (i) Improvement of Standards and Innovative Development; (ii) Universities and National Development; (iii) Management of Universities; (iv) The Research Role of the Universities; and (v) Emerging Areas of Importance. The last of the above themes comprised in turn the following sub themes: (i) Value-oriented Education; (ii) Environmental Education; (iii) Physical Education; and (iv) Education for Creativity.

The conference itself was inaugurated by Smt. Sheila Kaul, Union Minister of State for Education, Culture and Social Welfare. Dr. (Mrs) Madhuri R. Shah, Chairman, University Grants Commission, who presided over the conference, also addressed the inaugural session. Their addresses were printed in the last issue of University News.

It was a dialogue for re-inforcing the health and vigour of the higher education system in the country. It is not as if that the system evolved has been a total failure. It is also not as if there have been no misgivings expressed. But, the important thing is to be conscious of the shortcomings and a desire to improve and grow. The Conference of Vice-Chancellors was one such demonstration of the will to strengthen the university system in the country.

There can be no disputing, against the above background, the significance of the themes taken up for consideration. It is reported that the discussions in the groups were both free and frank. The Conference of Vice-Chancellors was followed by a meeting of the Secretaries to the Departments of Education of the States and Union Territories on May 23. On May 24, the Ministers for Education from different States met. All this shows the importance that both the UGC and the Government of India attach to "Education" in its broadest sense.

In a conference of this type it is but natural that recommendations are made for the constitution of task forces, working groups and sub-committees for evolving guidelines, for working out the details needed at operational level and for monitoring progress of implementation. Since the UGC is a statutory body vested with the powers of coordination and maintenance of standards, tasks identified by the different groups, are to be taken up by the UGC. The UGC's activities in the field of higher education are therefore bound to enlarge in the years to come.

The assembled Vice-Chancellors felt the need to say something about the manner of their appointment and working conditions. Perhaps such a thing has happened for the first time. That they should have felt compelled to talk about themselves, although the modern higher education system in this country is over 125 years old, may appear somewhat strange. It should be realised however, that the compulsions have been many. The recent trend in suspending the Vice-Chancellor and holding the Vice-

Chancellor responsible for many happenings in the campus while the powers and the foci of decision making lie elsewhere are some instances of the compulsions. Again, the authority that a Vice-Chancellor enjoys is not commensurate with the responsibility that he is supposed to shoulder. Furthermore, many a Vice-Chancellor today has to continuously endeavour to maintain peace in the university, contending all the time with his own faculty, students and karamcharis, many of whom are, for one reason or the other disgruntled and are looking for pretexts to create trouble and disquiet on the campus. That is why perhaps one ex-Vice-Chancellor has titled his book "Asking for Trouble: What it means to be a Vice-Chancellor Today."

Some of the recommendations made by the different groups are no doubt likely to be criticised by certain sections of university community and society. Restricting the number of students to be admitted into universities and colleges is one such recommendation. Such a move is no doubt a radical departure from the presently followed policy of 'open door' admissions. To that extent it means withdrawal of a privilege that is being enjoyed. Similarly, attempts at upgrading the syllabi are bound to meet with resistance. But then all those inclined to oppose this and similar recommendations must not only ask themselves but also answer, taking into account the realities of the situation and the objective of making such recommendations, questions like: What is the alternative if the objectives are to be achieved? Can there be any dispute about the need for improving the higher education system in the country so that the system is able to service better the needs of an evolving and changing society especially when the society supports financially the system by making a considerable amount of sacrifice? If they do not have a realistic answer to this and similar questions they should realise that perhaps for the time being at least, there is no escape from implementing the recommendations however distasteful they may appear to be to some sections of society. To bring in arguments based on other considerations is not being helpful for the simple reason that some measures are necessary taking into account the practicalities of operation. The question then likely to be asked is: Are practicalities going to override desired ideals? This question is no doubt valid. But the answer to this would be that while ideals should not be lost sight of, practicalities cannot be ignored in a situation where things are evolving, society is changing and the economy is still developing.

Some other recommendations are likely to strain the resources of the Government. For example, the recommendation to provide a gymnasium and play-fields to universities and colleges will mean heavy investments to be made and appropriate grants to be made available by the UGC. Likewise, the recommendation for strengthening research in universities would require a huge outlay. Here again one may turn round and ask 'where are the resources?' In these matters the basic question is: Are we *or* are we not going to place faith and reliance on our higher education system for furthering the economic progress of the country and in effecting the needed social transformation? If the answer is yes, there can be no escape from making further investments in higher education. Resources would simply have to be found.

One of the far reaching recommendations concerns the award of Research Fellowships and recruitment of teachers. The Review Committee on UGC (Jha Committee) made a recommendation in 1977 that there should be a national level test held for the purpose of recruitment of lecturers and for award of research fellowships. The text of the recommendation, reproduced below, has been endorsed by one group with a modification that the candidates who have the national level test should alone be eligible for recruitment as teachers.

> "A national examination should be organised jointly by the UGC, UPSC and AIU for post-graduates in different subjects and candidates who are declared successful in this examination should be given weightage for selection to the posts of lecturers and for research fellowships".

University autonomy and accountability of universities to society are two concepts basic to any discussion of the kind and character indicated above. There can no doubt be endless arguments on the precise components of each of these two concepts. But such arguments largely come from those interested in the status quo. The reports of the groups (printed elsewhere in this issue) do make one believe that status quo is not what is desired by the Vice-Chancellors, by the UGC and by the Government. The directions of change have been indicated. The thrust areas of action have been identified. The operational details will no doubt get worked out. Some kind of a sorting or sifting of such details may however become necessary in the context of the diversity that exists in the country. But such action of sorting and sifting will come in due course. What appears necessary is to convince the ultimate implementers of reform in universities, namely, teachers. Vice-Chancellors can only direct a play. It is the players who have to play the role. Are our players up to the mark? How is one to get each one of them to agree and get them to work as a team? What are the methods to be adopted to convince the society at large? These are questions which are likely to engage the attention of Vice-Chancellors in the days to come. We have no doubt some excellent players who are a tribute to our system. May their tribe increase.

In the ultimate analysis, as any optimist could see, there is no reason why Indian higher education system should not be a trend setter for, after all, education itself, as someone put it, long, long ago, is 'no exotic to India'.

25-5-1984 **—Editor**

Conference of Vice-Chancellors

Summary of Discussions of Group on improvement of Standards & Innovative Development

The Group under the Chairmanship of Professor Takwale, Vice-Chancellor, Poona University, discussed the various steps that have to be taken for improvement of standards and innovative developments, keeping in view the on-going programmes already initiated by the Commission like Faculty Improvement, Minimum Examination Reforms, Autonomous Colleges, COSIP/COHSSIP, Restructuring of courses etc. Twenty speakers participated in the discussion and many suggestions were made. As there were too great variety of suggestions made, these cannot be set down as final concrete recommendations of the Group. On the basis of majority views these suggestions are listed below and can be considered as group recommendations:

(1) **Problem of Numbers :** This Group is of the view that some bold steps are called for by the UGC vis-a-vis the Central Government to formulate a national admission policy for restricting admissions into the University System, as otherwise in the present set up of open access to all who pass the minimum qualifying examination in the general education sector, most of our universities. will not be able to withstand the pressure of 'increasing numbers', resulting in further deterioration of standards, resources by way of staff and infrastructure facilities, being already the limiting factors. There could be even a freeze of 'numbers' for sometime and no extra admissions, no new institutions, for a year or two. However, provision for alternative channels of further or continuing education through correspondence courses or open university may be made.

(2) **Ruralization of Higher Education :** Apart from problem of sheer numbers, there is also the problem of first generation learners entering the portals of our universities. Special programmes will be needed for bringing up the level of attainment of the first generation learners, in view of the new phenomenon now taking place viz. "Ruralisation of higher education".

(3) **Correspondence Education :** While distance education/correspondence education run by more than 20 universities is catering to a number of students, care should be taken to ensure that teachers earmarked for manning the different academic programmes under the correspondence education programme are sufficiently well trained and have the necessary motivation for the type of responsibility.

(4) **Linking Postgraduate Education with Research Work :** Research that is being done now in many universities has no direct bearing on the teaching done at the post-graduate level. Flexibility in the class room; and autonomy should be given to Postgraduate teaching centres to link research with teaching at specialised level.

(5) **Absence of Flexibility and Autonomy :** Universities today have become so rigid in their approach and functions, that it is very difficult to introduce or try out any reform or innovation or consider new ideas/suggestions put forward. While financial constraints is also an impediment in implementing successfully any innovative programme or innovation, the need for academic autonomy to colleges and departments cannot be overemphasized.

(6) **Non-viable Universities/Non-viable Colleges :** Some 30% of the institutions (i.e. universities/colleges today will come under the category of 'non-viable' and unless some bold steps are initiated for halting this unwanted growth in the number of such institutions, no improvement in standards is possible. In other words, limiting the number of institutions to the existing level of resources/facilities is important.

(7) **Linkages with Primary & Secondary Sectors of Education ;** Improvement of standards in the higher education sector cannot be viewed in isolation. This is closely linked with the standards of teaching/evaluation in the other sectors of education, namely, the primary and the secondary stages.

(8) **Delinking of jobs from 'degree requirement' :** The UGC/UPSC and other bodies concerned with this issue should jointly endeavour, to lay down certain guidelines under which it becomes possible, atleast gradually, to achieve this objective though it is difficult.

(9) **Collaborative Programmes :** These are highly desirable; there should be provision for exchange of faculty between universities, to the mutual advantage of both the participating universities. Linkages between universities/research institutes, University/Industry have also to be established for enabling a fruitful interaction between them.

(10) **Central Universities & State Universities :** UGC should pay more attention to State Universities and also to colleges where more than 80% of our students are enrolled; the possibility of setting up a Central University in each state should also be explored.

(11) **Value-oriented Education & Code of Conduct for Teachers :** Unless there is a check in the 'erosion of values' there cannot be any improvement. There should be provision for value oriented education; though we talk of moral and ethical education, there is no reading material available for students. There should be a code of conduct for teachers and students.

(12) **Backward Districts :** UGC should identify backward areas/backward districts and give adequate financial assistance to colleges located in these areas for balanced growth.

(13) **Vocationalisation at + 2 Level :** This has not materialised in any significant way, resulting in continuous increase in the number of 'admission seekers' into the University System year after year. Unless an extensive programme of vocationalisation is undertaken at +2 level, restricting the admissions, as already referred to, would be a very difficult task.

(14) **Attracting the best students and retaining the best teachers :** Our universities should not only attract best students, but also retain the best teachers by providing good salaries as otherwise only the second best or the third best will occupy the faculty positions to man the University Departments.

The present practice of promotion by 'seniority only' should be discontinued. Achievements and merit should be the criterion for promotion. The work of a teacher should be evaluated periodically and there should be provision for student evaluation of the performance of their teachers.

(15) **Follow-up Action :** On many of the programmes initiated and suggested by the UGC, follow-up actions be taken continuously to judge their success. For this purpose, effective monitoring machinery needs to be established.

(16) **Information Resource Centres :** There is a pressing need for setting up such centres in a number of universities.

(17) **Need of 'today' is more education, better education and a different education :** There is unfortunately no 'quality control' in the sphere of education; unless we identify the 'SICK UNITS' in our university system and eliminate them, standards will continue to get diluted further; the UGC has not acted so far in this direction; it is time to undertake this task. Education that we impart should be productive and creative and also linked to the problems of the people whose interests the universities are looking after.

(18) **Problem of matching grants :** Many of the recommendations of the UGC Visiting Committees remain only on paper as the universities are unable to take advantage of the UGC's financial assistance for want of a similar matching contribution from the State Government. It is, therefore, essential that the UGC examines this point on a priority basis and considers, if necessary, the question of assisting all its programmes on a cent per cent basis.

Specific issues with reference to various 'ongoing' programmes initiated by the Commission.

(19) **Autonomous Colleges :** More colleges should be identified under the programme; the colleges already identified under this scheme, mostly in Tamilnadu, are doing good work and there is need for increasing the number of colleges participating under this scheme.

(20) **Restructuring of Courses :** More colleges must come forward for taking up this scheme as per guidelines laid down by the UGC. By incorporating these, there are many ways by which the existing curricula/syllabi can be restructured by including applied courses as well as extension and personality development activities like sports, fine arts, etc. All these be encouraged and supported.

(21) **National Educational Testing :** While this step of the UGC is welcome, there should be no 'curtailing down' of the number of JRF's already allotted to the universities by the UGC. In fact universities are in a better position to assess their regional needs and award followships to deserving scholars for undertaking research on 'socially relevant problems' related to the societies/region the university is serving.

A similar 'national scheme' for recruitment of teachers also could be envisaged to prevent the further erosion of quality now occurring through the present recruitment procedures. UGC should establish norms for and have its own machinery for assessing performance of universities and colleges. UGC should also provide financial assistance as incentive for good performance. The present practice of equating all universities does more harm to the quality and standards in the universities.

(22) **Adult Education/Continuing Education :** This should not be an ad-hoc programme, but should continue to be an integral part of university activity and should get institutionalised. Universities/colleges doing this work should aim at concentration of their efforts at selected areas to achieve tangible results in literacy, economic development and reduction in population growth and poverty.

(23) **Examination Reform Programme :** Minimum examination reform programme should be adopted by all. The programme should also include guidelines for pre-conduct and post-examination work.

The major programme of Semester System introduced in many universities is facing serious administrative difficulties. The semester programme needs decentralised approach and autonomy which is absent or against the centralisation approach in university examination demanding uniformity. It is necessary to review the programmes in the light of experiences and evolve a programme appropriate to our conditions by retaining basic principles in the semester system. For the success, more autonomy and flexibility needs to be given to colleges/departments.

(24) **Summer Institutes for Teachers :** Teachers should participate in Summer Institutes of a national level where national level scholars would be invited to up-date his subject level competence. More Institutes be organized to give more teachers the opportunity for orientation and updating their knowledge.

(25) A review of working of the 'State Universities' should also be undertaken by the UGC on

the same lines as was done in case of Central Universities.

(26) State Universities get establishment support from the State Government. In order to give proper financial support to implement UGC policies and programmes of higher education, a state level body, preferably like the U.G.C., be established in each State. Proper statutory position, functions and relationship with UGC should be clearly established. It is hoped that such a body may help in ensuring support of State Government to Universities in all their teaching, research and development activities.

Recommendations of the Group on Management of Universities

Vice-Chancellor

We were distressed at the manner in which appointments to the post of Vice-Chancellor are becoming controvercial as even the appointing authority is not clear in some cases. The Conference felt that the appointment of the Vice-Chancellor should not be politicised and the Government should create conditions in which the dignity of the Head of University is upheld and he is allowed to function effectively.

The Conference felt that the terms and conditions of appointment and the service conditions, including emoluments, should be made uniform throughout the country, if necessary, through a central legislation.

The Conference was of the view that on account of the short term of appointment for a Vice-Chancellor he becomes transient and the continuity of the development process of a university is not possible. Planning being a long term process it is suggested that there should be a permanent Planning, Monitoring and Evaluation Board in the university to ensure permanency and continuity in the programmes of progress in the university.

Recruitment

The Conference felt that the system of recruitment of teachers has to be reformed. The Vice-Chancellor should be compulsorily invited in recruitment at the first level of lecturers. Lecturers should have a probationary training period and periodical evalution of their work to improve their quality. In order to avoid recruitment of unsocial elements who are new found to destory the academic atmosphere of the university, it may be necessary to have a verification of their past conduct as in the case of recruitment for senior services in the country.

Recommendation (9) of the Review Committee on UGC, 1977 (Jha Committee) may be implemented with a modification that the candidates who have the national level test would alone be eligible for recruitment. The text of the recommendation is reproduced below:

> "A national examination should be organised jointly by the UGC, UPSC and AIU for post-graduates in different subjects and candidates who are declared successful in this examination should be given weightage for selection to the posts of Lecturers and for research fellowships".

We feel that the management of universities is a very complex affair and the normal rules of Government are unsuitable for the efficient management of universities. The Conference therefore recommends the evolving of a system relevant to the requirement of the universities.

The Conference felt that politicisation of the universities has damaged the academic atmosphere and therefore strongly supports the recommendations of the Committee on Central Universities on the depoliticisation of the University bodies and for making them more compact and functional. Wherever Senates/Courts exist they should be made deliberative/advisory bodies.

The Conference felt that in order to improve the management of universities and the academic standards it is necessary to have clear-cut rules and procedures defining the processes and functions of the University administration, codes of conduct for all sections of the university community, and a Student Management code for improvement of discipline.

With regard to the deterioration of law and order we are of the view that the academic sanctity of the campus has been lost on account of anti-social element creating all problems on campuses, as such it has to be clearly understood that the university campuses are not outside the jurisdiction of the law and order machinery of the Government and the police does not require any invitation to enter the campus. The police should be free to take all action to safeguard the self-respect, dignity, life and property on the university campus and similarly the universities should not be shy to invite the police whenever there is a law and order situation on the campus.

University Funds

The Conference felt distressed at the poor financial condition of universities specially the older ones which get no funds srom State Governments for any development work. Even the Block Grants are not revised frequently enough to meet the actual expenditure. The matching grants are not released in time resulting in many works remaining unfinished for long periods. We suggest that the Govt. of India and the UGC take up this issue at the highest level and make the State Govt. more responsive to the needs of universities.

There is need for the revision of the conditions of the Block and maintenance grant and for evolving a system by which the UGC informs the States about the likely requirement of matching grants in the beginning of every plan period. For critical areas 100% grant should be given by UGC.

Under the guise of democratisation, the administrative and academic bodies of universities have

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been considerably diluted resulting in communal, political and trade union infiltrations. This situation is doing incalculable harm to the university system. This must be put an end to. The recommendations made by the Review Committee on Central Universities in this regard should be accepted.

In order to raise the effectiveness and efficiency of university management system, we recommend that orientation-cum-training programmes of university and functionaries should be strengthened on priority basis. Service conditions of Registrar and other management staff should be drawn by UGC/Govt. and applied uniformly to all universities.

The UGC should set up a Standing Advisory Committee and Standing Task Force to continuously assess the problems of management of the universities, and suggest measurements for its improvement, and it should be followed by periodic evaluation of changes introduced in the university managment.

Report of the Group on Universities and National Development

The theme of this group was "Universities and National Development". Over 25 Vice-Chancellors including 2 officers of the Ministry of Education and Culture participated in the deliberations of this group. Prof. M.M. Chakrabarty, Vice-Chancellor, Jadavpur University was the Convenor.

(2) The note under Item No. 3 of the Agenda circulated by the UGC as also various other papers presented during the Conference gave the background information on the theme concerned. The observations made by the Vice-Chancellors in the General Session as also views expressed by Dr. (Mrs.) Madhuri R. Shah, Chairman, UGC, in her welcome speech and the direction given by the Hon'ble Minister for Education, Smt. Sheila Kaul were kept in view during the deliberations of the group.

(3) The statisties relating to the growth of universities, colleges, teachers, students etc. over the years 1950-51 to 1982-83 were noted alongwith the enrolment in the faculties of Arts, Science, Commerce, Education, Engineering/Technology, Medicine, Agriculture, Veterinary Science, Law and others etc., from the publication of "Selected Statistical information on University Education" circulated by the University Grants Commission in the Conference.

(4) Within the broader umbrella of the theme "Universities and National Development" various issues relating to this goal were discussed at great length and finally the following consensus emerged:

(i) Education is as important input for development and towards this end the universities are the key institutions in promoting the process of National Development through their programmes of teaching, research, and extension. The universities provide the required trained and educated manpower to implement activities/programmes relating to National Development. Promotion of National Development is based on sound programmes of National integration which are ultimately based on cultivation of National Consciousness. It order to ensure that universities are the change agents in the process of national development, they must ensure the spirit of national integration in the community of students and teachers. National integration—National Consciousness are prerequisites of the involvement of the universities in the process of national development.

(ii) Universities have been able to play an effective role at the micro-level in the process of National Development. However, their contribution at the micro level which relates to the people at the grassroot levels are minimal and not yet visible. In order to accelerate the process of Narional Development through the involvement of universities it is desirable that universities must also be involved in the process of Development at the micro level where benefits are available to the masses.

(iii) It is essential that universities are adequately funded/maintained so as to ensure that they are 'Effective' in their programmes of teaching, research and extension so crucial for the National Development and towards this end special care needs to be given to the development of newer universities and particularly those in the backward regions of the country. Under developed or less developed universities in the backward regions of the country should merit special consideration in their developmental efforts in the 7th Five Year Plan period so as to minimise regional imbalances in the growth of higher education. While adequate financial supports may be given to such universities these universities may also explore the possibilities of making use of non-monetary inputs towards the development of their universities and hence in the process of the regional development.

(iv) The schemes of restructuring of courses initiated by the University Grants Commission few years ago with a view to making first degree courses more relevant to the rural environment and to the developmental needs of the community and to link education with work/field/practical experience and productivity should constitute an important effort of the University Grants Commission towards promoting university role in the process of National Development during the 7th Five Year Plan period. The Scheme should ensure relevance, application orientation, flexibility and diversification as also efforts to provide linkages between Education and emerging employment opportunities including self-employment as also provisions for newly emerging subjects/disciplines. It is essential that this scheme of restructuring also includes courses at the Postgraduate levels.

(v) Universities have also to play a major role in providing the manpower required in specialised and new emerging areas such as Electronics, Computers, Ocean and space Science etc. etc. There is a need to introduce Postgraduate diploma courses in new areas of Scientific, technological disciplines. This could also be one of the thrust areas of the activities of the universities in the 7th Five Year Plan period.

(vi) Extension should be the 3rd important major activity of the universities like teaching and research as envisaged by the University Grants Commission in its policy frame of 1977 and should be given the same importance as teaching and research. It should gradually permeate within each subject/discipline in the form of change in the curriculum of teaching methods and evaluation strategies. The university system should absorb the concept of "Extension Culture" as its integral component and a beginning be made by providing at least 25% time allocation for the off-campus extension work through community education type programmes.

Extension should not be looked upon as a a welfare activity. NSS should be integrated into the extension work of every department and should form a part of the internal and external assessment. Extension activities, programmes of contiuning Adult Education, NSS, NCC etc., be organised under one umbrlla to promote coordination and achievement of goals.

Extension activities should constitute one of the major efforts of the UGC/Universities during 7th Five Year Plan period towards the promotion role of universities in the cause of national development. Universities should adopt colleges and colleges should adopt schools for their total development under the extension programme as envisaged in the guidelines/policy frame of the UGC in this regard. Further universities/colleges may adopt Mohallas/Villages/Blocks/Communities/Local Bodies etc. for their total development.

(vii) Universities should also be actively involved in organising programmes of continuing education for various target groups. While organising these programmes priority should be given to the programmes of continuing education for the weaker sections of the society. Universities should provide opportunities for job oriented/professional courses to every one so as to improve efficiency in his/her job. Life long recurrent professional education should become reality for every one in every vocation. Students from colleges/universities should be able to attend these courses on part-time basis. Organisation of short-term/long term non-traditional courses for various groups Rural/Urban youths, women workers from the organised Sectors etc. should also receive special attention of the universities in the years ahead. Life long education, education for persons of all ages, continuing education, learning society etc. should be among the goals of the universities during the 7th Five Year Plan period.

(viii) Universities should be actively involved in a big way in the implementation of new 20 point programme of the Govt. of India such as eradication of adult illiteracy (Point No. 16), population Education (Point No. 13) and programme of integrated rural development (Point No. 3) Universities should contribute their might through students and teachers in achieving the goals of these National programmes during the 7th Five Year Plan period. Programmes relating to Science for the masses, transfer of technology, Health care, Legal literacy etc. should also be promoted.

(ix) Universities should undertake actively action research or applied research relating to problems of the regions. There should be departments/cells/units in the universities to promote programmes/activities on regional developments. Universities' participation in such regional developments may be organised in collaboration with other agencies in the region/Government departments. The solution to the problems of the region through the efforts of the universities/colleges should be another area of importance in the 7th Five Year plan period.

(x) Proper use of tools of educational technology and methods of distance education involving the use of modern media such as print, audio and visual should be the instruments for communicating the messages of education to larger groups of masses and should be effectively utilised in the educational system during the years ahead so as to accelerate the contribution of the universities in the overall process of National Development.

(xi) The institutions in the rural and backward areas could be taken up in the first instance as the institutions where new experiments on the involvement of universities/colleges in promoting the process of National Development could be carried out.

The universities having been accepted as instruments of social change can now through their new programmes of teaching, research and extension with the involvement of students and teachers provide leadership to the community at large and the under-privileged community in particular through these new concepts of non-traditional educational system and thereby ensure the process of life long/own-time educational opportunities for the different sectors of the community, whether urban or rural, thereby involving themselves in the total upliftment of the society which only can ensure national goals and aspirations towards the growth of a self reliant society and making it possible the fulfilment of the dream of our late Prime Minister Pandit Jawaharlal Nehru of building a free, modern and United India.

Report of the Disscussion Group on the Research Role of Universities

(1) The meeting of the group was attended by nearly 75 Vice-Chancellors and other delegates to the Conference. There has been wide participation; nearly a third of the members present, offered suggestions on the topics presented for discussion.

(2) The group reiterated the fact that teaching and research has a symbiotic relationship and both should form part of the activities in any Institution of Higher learning. The group generally endorsed the content of the Commission's report on improving the quality of scientific research in the universities and the contents of the agenda paper presented to the members.

(3) The group while realising the importance of basic research in the university environment, also emphasised the need for research that is relevant to the economic development of the country. Members pointed out that considering the overall research needs of India, not only the university departments but also the colleges both with under-graduate and post-graduate instructions could play a role in pursuing research and meeting the research needs of the country.

(4) One of the major points that came up for consideration is funding for research. At present, the amount of money allocated to university research is roughly of the order of 2 to 3 percent of the total allocation made for research in country. We may perhaps compare this percentage with the provisions made by the advanced countries which have evolved a funding pattern on the basis of their long experience. We may have to move in that direction and reach close to that level of funding in course of time. The consensus of the group indicates that at least 10% of the total allotment for research should be available for university research. Considering the budget for higher education, it will be desirable if 50% of the provision can be ear-marked for supporting research in Institutions of higher learning.

On the one hand more funds should be provided as we have suggested above for university research but on the other hand optimum utilisation should be made, of the available resources. This requires a system of sharing major facilities through proper management structure, simplification of procedures within universities for quick utilisation of funds, creation of a proper climate for research in the departments and proper monitoring and evaluation at various stages of the research work.

(5) In order to achieve the objective outlined earlier a few approaches are indicated. It has already been agreed in principle that each Ministry would have a research and development in Science & Technology component. At least 5% of this component should be available for research in universities and institutions of higher learning since the promotion of basic research is needed not merely for the creation of new knowledge but also for development of manpower for the various R&D Institutions in the country. Similarly, the research investment now made in the private sector, though modest should contain a percentage allocation for supporting university research.

One of the aspects about which a large number of members who participated expressed concern is the quality of research in our universities and especially the level of work for Ph.D. Award. Members felt that there has been a growing dilution of standard of research degrees. A suggestion was made that among other measures that may be contemplated, the UGC may consider formulating certain guidelines for M. Phil and Ph.D. awards. These may be recommended for adoption by the universites at the National level.

(6) In general, the dominant part of the research done in the university system today is for the award of Doctoral Degrees. While this should be encouraged, it is to be treated more as a training ground for research and as a source of manpower development for research organisations. The real research contribution of universities may come only from post-doctoral research. It is necessary to consciously promote this activity in the universities.

(7) It is no longer possible to make significant contribution unless a critical level of infrastructure facilities and funding are made available. It may be necessary in this context to establish strong Schools of Research. Viewing from this angle, the initiative taken by the UGC for establishing National Science Centres is a welcome step. The members made observations endorsing the initiative taken by the UGC in this regard.

(8) Another aspect that was touched upon by the members of the group refers to making research reasonably attractive in comparison to other career opportunities available in the country and quality of individuals selected for research. The group commended the research scientists' programme introduced by UGC as well as the contemplated national testing for award of Junior Research Fellowship. Some of the members pointed out that the suggestion for maintenance of record of work as well as attendance of the research scholars on the campus as necessary and desirable.

(9) Research is an intellectual activity which will thrive only in an environment conducive to such a pursuit. It is pointed out that university should consciously endeavour to promote research centre and endeavour to foster research environment. It may be in many ways like promotion of seminars and conferences, encouraging discussion groups, making available library facilities and supporting such activities as may encourage and help academic endeavour.

(10) It was felt that once the quality of research work is made to improve through all the measures that have been suggested here, we should ensure that the persons who qualify Ph.D. degree from the universities should be expeditiously and usefully employed. It will not be desirable to make them individually look for jobs. The University Grants Commission and the various agencies who employ research workers should develop a method to ensure employment for the products of the research system in the universities. This will open research careers for the new entrants and will attract a large number of very competent people to research activity.

Recommendations of Group on Emerging Areas of Importance

(1) Value Oriented Education

Value orientation should be the primary objective of education at all levels. Since the objective of education has to be, primarily, the development of the personality of the individual so that he or she may play a meaningful and effective role in the development of the society and the country, it has to be value oriented. Value oriented education does not imply moral education, it has a wider connotation and includes value of physical education, vital education, mental education, aesthetic education, ethical education, spiritual education etc. Value orientation does not merely imply an intellectual discussion on the theme of value as an integral part of the syllabus in various disciplines, but also the practice of those values in the day-to-day life by the students and teachers. The Group, therefore, recommends that besides including value oriented subjects in the foundation courses at the first degree level, attempts should be made to introduce value oriented concepts in all subjects of studies.

The Group further emphasises that steps will have to be taken to introduce value oriented concepts as a part and parcel of the life of the individual in the primary and secondary education and even teacher education. It should also form an important component of the continuing education programme.

Value oriented education should particularly include subject like International Understanding and Peace, Human Rights, knowledge of India and Indian Culture, Indian Values and National Heritage etc.

(2) Physical Education

The Group felt concerned about the neglect of physical education in the colleges and universities in general, and also the little importance given by the UGC to physical education and development of sportsmanship qualities among the students in its programmes. The Group recommends that to start with, the UGC must plan to ensure that during the next five years each college and each university has the minimum facilities of a Gymnasium and play fields. Further, during the next 10 years the UGC should provide funds to equip every college and the university for fullfledged programmes of athletics, combatives and aquatics. The Group, even at the risk of repetition, would like to emphasise that training in physical education should necessarily include training for the development of sportsmanship spirit among the students. The achievement in physical education should also count for credit in the academic performances of the students.

(3) Environmental Education

It essentially implies the creation of awareness among the students about their environment and sorroundings. The Group therefore emphasises that besides various types of common themes, special themes, in this connection would be "Man and Evolution" and "Man and the Eco-Systems" and these should be promoted through media of education e.g. exhibitions, excursions, seminars, films etc.

(4) Education for Creativity

The Group feels that education for creativity should not be confined only to universities and should not be limited only to the areas of fine arts. Even scientific systems could be made instruments of creativity. What is important is the development of power of imagination and for appreciation for art. The Group therefore recommend that the UGC should provide funds to the universities and colleges for setting up 'centres for creative education'.

(5) General Recommendations

(i) The Group in particular recommends that a special cell be created in the UGC to look after the needs of all the four areas listed above. It further recommends that a committee be set up by the UGC to explore how these areas can be incorporated increasingly in the entire programmes of education so that these areas can receive due importance.

(ii) It also recommended the UGC should set apart at least five crores of rupees to give initial grants to colleges and universities so as to give a new impetus to the programmes mentioned in the four areas.

(iii) Training programmes of teacher's in regard to four areas should be given high priority and training camps and seminars should be organised by universities and initiative in this regard should be taken by the UGC.

The UGC should also initiate a programme of providing funds to the colleges and universities for the organization of high level cultural programmes and sport competitions. ☐

Dr. Kidwai Addresses Convocation of Bidhan Chandra Krishi Vishwavidyalaya

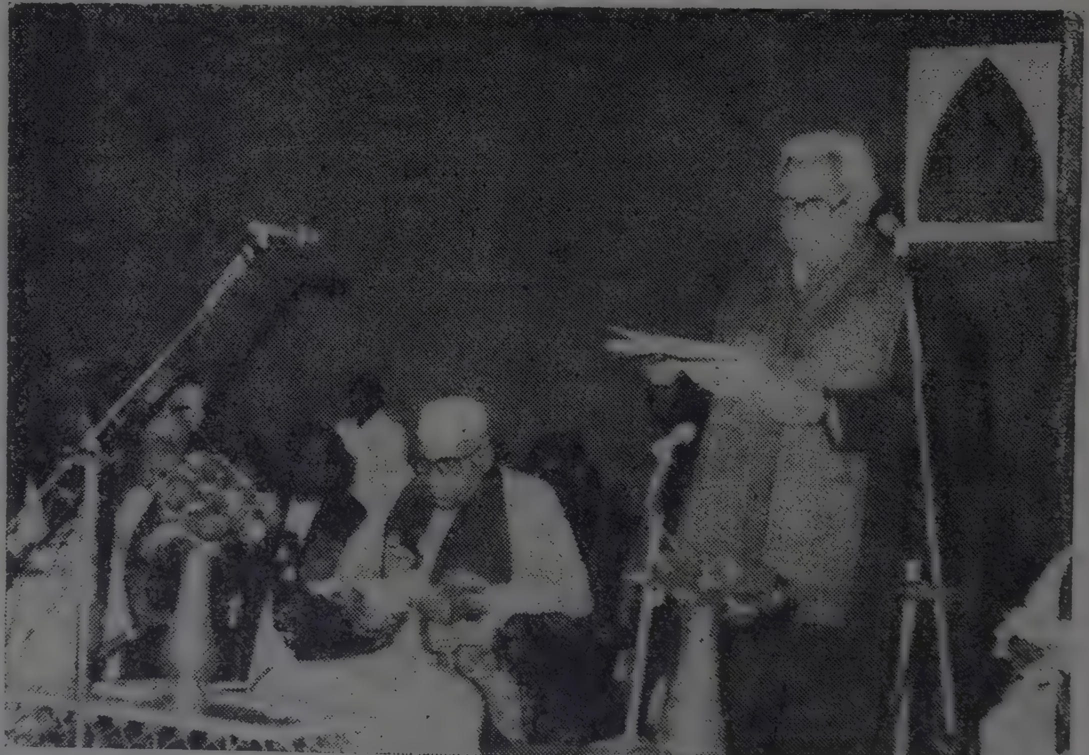
Excerpts from the convocation address delivered by Dr. A.R. Kidwai, Governor of Bihar, at the Bidhan Chandra Krishi Vishwavidyalaya.

"...Area-wise India is the seventh largest country and with 700 million people demographically, the second populous nation in the world. It occupies about 2 p.c. of world's area, but about 14 p.c. of its population. Over 75 p.c. of our total population depend on land, and water for their livelihood: their main vocation being agriculture or agro-based industry. The agricultural sector contributes nearly one-half of the national income, supplies the bulk of wage goods required by the non-agricultural sector and raw materials for industry. It contributes a good portion of the country's exports, transport, trade, commerce, marketing and banking occupation in the country. Thus, agriculture has tremendous impact on the national economy.

"Agriculture in India has made remarkable progress during the last three decades. The production of foodgrains has gone up from 55 million tonnes in 1950-51 to 82 million tonnes in 1960-61, to 108.4 million tonnes in 1970-71 and 130 million tonnes in 1980-81. Preliminary estimates indicate that production of foodgrains will reach 140 million tonnes in 1983-84. Correspondingly the inputs in agriculture have registered appreciable increase. The net irrigated area increased from 22 million hectares in 1950-51 to 25 million hectares in 1960-61, to 31 million hectares in 1970-71 and to 41 million hectares in 1980-81. The annual consumption of fertilisers is a good indicator of the country's performance in agricultural production. From a modest 3.06 lakh tonnes fertiliser consumption in the year 1960-61, it increased to 22.65 lakh tonnes in 1970-71, 55.16 lakh tonnes in 1980-81 and about 61 lakh tonnes in 1981-82. There has been major thrust in credit policy over the last one and half decades so as to cover the rural people. In the selection of centres for opening new branches of Banks premium has been placed on covering potential rural centres especially unbanked centres. The number of Branches located in rural areas which was 1860 before the nationalisation of Commercial Banks in June 1969 went up to 18,768 towards the end of the year 1980-81 which was over 50% of the total number of Branches (37,119). At the end of the year 1981 there were 106 Regional Rural Banks.

"The crux of the problem of agricultural development consists in the intensive use of land to increase per unit productivity. The prime factors leading to intensification of land use are utilisation of irrigation facilities and an increasing use of fertilisers and improved high yielding varieties of seed and adoption of improved agronomic practices. Due to the appropriate priorities given by the planning bodies both at the national and State level during the last three decades of planning we have been able to make major breakthrough in agricultural production by applying appropriate technologies. It is indeed a major achievement which has made India self-sufficient in the production of foodgrains in spite of the fact that population has increased from 361m. in 1951 to 700 m. today.

"In the use of modern science and technology agricultural Universities and research institutions have played a pivotal role. As you are aware, farm research in the country is carried out by a large number of public and quasi-public institutions headed by the Indian Council of Agricultural Research (ICAR). Established in the year 1929, it is the apex body for formulating plans and co-ordinating agriculture, animal husbandry and fisheries education and research and their application. In the field of agricultural education



Dr. A.R. Kidwai, Governor of Bihar, delivering the convocation address at the Bidhan Chandra Krishi Vishwavidyalaya.

the ICAR performs a role similar to that of the University Grants Commission. There are now 23 Agricultural Universities in the country including the Indian Agricultural Research Institute (IARI), New Delhi, with the status of deemed University for education and research both at Post-graduate and Doctoral levels. The yearly out-turn of agricultural graduates and post-graduates is now about 5100, Veterinary graduates and post-graduates 850, and Agricultural Engineers 280. Today the total stock of agricultural graduates and post-graduates is about 1,17,700 in the country. We may, therefore, say that the base of agricultural education and research has increased enormously and we can boast of an alert and highly qualified agricultural manpower.

"After we have achieved self-sufficiency in the production of foodgrains fresh strategies require to be formulated to meet future challenges. Agricultural education and research has to adjust itself to the fast changing agricultural and rural scene so that it can be more effective in the processes of overall rural development. I think it is time for deep introspection, detailed review, re-structuring the syllabus for agricultural education and re-fixing priorities in agricultural research to meet new challenges in the current decade and in the 1990s. Exhaustive studies for the development of agriculture, animal husbandry, fisheries, agricultural research and education have been made by the National Commission of Agriculture (1970-76). A number of projections have been made in different fields. Deliberate decisions have to be taken on various issues posed by the Commission.

"Population projections indicate that our population will rise to one billion by 2000 AD and food requirements will be of the order of 230 million tonnes. It means that in the next 15-16 years production of foodgrains will have to be increased by 90 million tonnes at an average of over 6 million tonnes per year. The broad strategy will be to develop further irrigation as rapidly as possible and more systematic utilisation of land. It is significant to note that of the total geographical area of 32.88 crore hectares, total crop area accounts for 17.51 crore hectares. Barren and uncultivable lands, permanent pastures and grazing lands, cultivable waste fallow lands cover 7.27 crore hectares or 21 p.c. of the total area. This is one of the reasons that has prompted many economists to suggest that there are enough lands in India which can be brought under cultivation. In addition to extensive soil surveys research on all aspects of soil health and fertility will have to be conducted. Waste land unsuitable for cultivation can be well utilised to grow trees and plantations for fuel, fodder and fibre. Energy yielding plants are particularly important for this country. Even the marshy tracts and salt affected lands can be put to some use e.g. vegetation growth. In fact, there is hardly any type of land that cannot be used with new technologies. Agricultural research should take on such a challenge.

"Agricultural output has undoubtedly risen throughout the plan period; but yields have grown slowly and per capita agricultural production has remained stagnant. This has proved to be a constraint on the pace of general economic development and fluctuations in agricultural output have often led to uneven cut-backs in public investments and spurts of inflation, both of which had adverse effect on growth.

"A rapid irrigation extension is, no doubt essential, but the more immediate task is to make more effective use of the potential already created. This will increase the present annual average grain yield of 1.7 tonnes per hectare to 4 tonnes or even more. How to bring about the command area development and enhanced crop yield is a challenge both to authorities and agricultural scientists. Apart from removal of inadequacies of water distribution system and management, successful kharif and rabi crop production will necessitate a detailed micro-level planning to find out cropping patterns which are suitable for the area and are adjusted to the rainfall rhythm. It will be necessary to carry out location-specific research in the major agro-ecological zones of each state.

"Nitrogen, phosphate and potash constitute the macro-nutrients, required in large quantities as compared to zinc, iron, copper, manganese, magnesium and boron called micro-nutrients needed only in minute quantities. It will be desirable to apply the specifically needed nutrients on the basis of soil tests. Rotation of crops, besides growing leguminous plants like green manure and cluster beans in order to restore the diminished fertility of the soil.

"The country's current consumption of fertilisers is about 6 million tonnes. The nutrient utilisation comes to only 20 kg. per hectare for wheat in India as compared to 430 kg. in Japan, 274 kg. in U.K., 210 kg. in Egypt and 106 kg. in the U.S.A. Reduced quantum of fertiliser input results in lower yield. Application of correct dose of right type of mixed nutrients at the right time, is crucial to get their best in increasing farm productivity. The agricultural scientists must find out requirements of nutrients at the disaggregated levels crop-wise and season-wise.

"I feel that one of the shortcomings of agricultural operation is that the farmers have inadequate knowledge of improved methods of today. Modern agricultural know-how is available but there is a lag in the transfer of this knowledge from the agricultural universities and research centres to the field. The demonstration farm of a university produces 5 tonnes a hectare whereas the farmer in the surrounding locality produces hardly 1.5 tonne per hectare.

"Dryland farming is another important field where there is considerable scope for improvement and requires urgent attention. At present the drylands as the rainfed areas are called, account for three-fourths of India's cropped areas, producing about 40% foodgrains. The added importance accrues to rainfed areas as they grow almost entire quantity of pulses, coarse grains, besides major portion of oilseeds and cotton. Except cotton, other dryland crops do not seem to have received adequate attention. Experiments have been made successfully in some Latin American and some African countries to increase productivity in drylands. In India the International Crops Research Institute for Semi-Arid Tropics (ICRISAT) is also developing new cultivation methods. This is an area in which further research and field studies should be taken up by the Agricultural Universities and research organisations.

"While the technical aspects of agricultural development will be the priority subjects, agricultural education and research has to increasingly address itself to the larger issues of socio-cultural development of rural society, of rural milieu, of rural poverty and of rural employment or unemployment or the entire process of rural development.

"Poverty in India has been a fact of life for centuries, but it is now an important subject matter of study as an economic and planning concept with far-reaching implications of the society, especially the rural society. Since the publication of Dandekar and Rath's "Poverty in India" (1970) a number of studies have been made to estimate on the one hand, the percentage of population living below the poverty line and on the other, the percentage of labour force without work. The problem of bringing up to certain minimum levels the productivity and incomes of the community below the poverty line can be tackled by a package of different sectoral programmes. Agricultural scientists and researchers have to take into consideration the spirit of rural development, identify different categories of people living below the subsistence level and apply the results of their research and training to suit vocations and economic activities of these people.

"In this connexion the role of the agro-service centres, consisting of agricultural graduates, engineers, farm specialists and others, assumes special significance. The idea of structural changes (e.g. land reforms, economic holdings, infra structural changes), technical know-how for recycling the agricultural wastes, and other vocations like animal husbandry, pisciculture, poultry farming can be transmitted to the farmers through agro-service centres. There is no reason why the young agriculture graduates cannot take the lead in setting up in a big way such centres, whose number was hardly 3250 in 1982. Injecting the results of research and development and market surveys into training of artisans, craftsmen, farmers and others concerned, needs to be considered as an important aspect of agricultural extension service. A number of domestic industries can be established in rural areas by the farmers themselves using their own agricultural wastes, byproducts and other resources within their reach.

"As a corollary to this, agricultural research on all aspects of post-harvest technology should be intensified. It is only through improved post-harvest technology that higher value-added products can be prepared in the village itself. Besides, through improved post-harvest technology various organic wastes and cellulosic materials like straw can be enriched and made into complete food for farm animals, thereby helping in the establishment of fodder and feed banks to support the animal husbandry programmes formulated for the benefit of marginal farmers and landless labour. I would suggest multi-disciplinary operational research projects in this regard.

"In the field of agricultural education emphasis should be given on training farm graduates who can return to a career in farming. We should have more Krishi Vigyan Kendras to spread the latest technical skills to farmers through the process of learning-by-doing. In addition to formal and non-formal education through agricultural Universities, colleges and Krishi Vigyan Kendras training programmes for developing cadres of self-employed soil-health-care, plant-health-care workers, like Auxiliary-health workers, should be provided with stronger linkages between research and development agencies.

"In the coming years agricultural scientists will have to play a more crucial role than others in the socio-economic development as they provide direct link with the rural people who constitute the bulk of our population and are engaged in the production of food and other basic requirements for the advancement of our country. "Our final aim" as the late Pandit Jawaharlal Nehru explained the objective of planning and development, "can only be classless society with equal economic justice and opportunity for all, a society organised on a planned basis for the raising of mankind to higher material and cultural levels, to a cultivation of spiritual values, of co-operation, unselfishness, the spirit of service the desire to do right, goodwill and love, ultimately a world order." This is a challenge. I wish the younger agricultural scientists who are graduating today and embarking on a new career, to accept this challenge and perform the important task of agricultural and rural development and function as catalytic agent of change in rural society. I hope that as you are appropriately equipped with knowledge of modern science and technology, qualities of discipline and leadership and inspired by a sense of dedication and patriotic fervour you will achieve your mission and my best wishes are with you." □

KAU Budget for 1984-85

The budget for the year 1984-85 of the Kerala Agricultural University presented at the tenth annual meeting of the General Council held on March 29 and 30 at the College of Agriculture, Vellayani shows a surplus of about Rs. 50,500. The budget has estimated receipts of Rs. 16,72,12,000 and expenditure of Rs 16,71,61,000.

The budget gives top priority for research programmes accounting for 46 per cent of the total outlay. Education gets 40 per cent.

The Council was informed that the seats for BVSc & AH would be increased from 80 to 120 to meet the demand of veterinary science graduates in the State. Steps are also being taken to start a post-graduate programme in the Fisheries College.

Other proposals are for the establishment of a College of Agricultural Engineering, Faculty of Forestry, a Department of Environment and Landscaping, a Centre of Excellence for studying animal diseases, strengthening of departments of virology and toxicology, doctorate programmes in Agrl. Extension, Animal Management, Pharmacology and Surgery.

The house was also informed that the Department of Home Science with a post-graduate course at the College of Agriculture, Vellayani and the Centre of Excellence for plantation crops and spices at the College of Horticulture, Vellanikkara have been started. The University, it was stated, would expand the extension education programmes by adding more number of Farm Advisory Counters and Farm Clinics at different centres. Consultancy services charging nominal fees in agriculture, animal sciences and fisheries, would be launched in the near future.

It was also proposed to start a central training institute under the Directorate of Extension to make the training programmes of the University more effective. An educational technology unit and a traditional media cell would also be established soon.

A mobile exhibition-cum-audiovisual unit and a museum-cum-information centre would be developed under the University. Steps are being taken to start Krishi Vigyan Kendras in Alleppey, Cannanore and Pathanamthitta districts, in addition to those at Pattambi and Ambalavayal.

Underwater archaeological centre opened by Tamil Varsity

Tamil University at Thanjavur recently opened an Underwater Archaeological Centre at Mandapam. The Centre was inaugurated by the Vice-Chancellor of the University Dr. V. I. Subramaniam, on 29.4.1984. The centre has taken up a project on 'History of Traditional Navigation'. This project is for compilation of data regarding history of navigation in South India from Tamil, Telugu, Malayalam and Kannada literature, epigraphy, coins, sculpture etc and also from field studies to be undertaken by contacting fisherfolk people actually engaged in boat manufacturing, navigation etc. It is felt that this study will help to unearth the ancient harbours, cities, ships and trade commodities sunk in the seas. This will also further help to know about the cultural history of Ancient Tamils, their knowledge in Science and Engineering, the design features of ancient ships, ancient architecture, navigation and metallurgy and related technology.

There are many evidences in literature to the fact that Tamils were good traders in ancient times. Tamils went to various countries like Greece, Rome, China etc. in ships and traded with them even before 4000 B.C. Commodities like wine, brass, lead, glass, copper, tin etc. were brought by ships to the ports of Tamil Nadu in exchange of pepper, pearls, ivory, diamonds, silk etc. In the course of time many harbours, ports, docks, and many sea shore towns of Tamil Nadu were swallowed by sea. Many cargo and war ships had been sunk and they are under the sea now.

Foundation day of JU celebrated

The 20th Foundation Day of Jiwaji University was celebrated on 23 May 1984. Dr. K. K. Tiwari, Vice-Chancellor presided over the function in which teachers, students and employees actively participated.

The foundation stone of the University was laid by the then President of India, the late Dr. S. Radhakrishnan. The first Vice-Chancellor of the University was Dr. S.S. Bhandarkar. Dr. Tiwari in his presidential address explained the progress made by the University during the last 20 years.

Dr Tiwari disclosed that the University conducted 123 examinations at which 50,000 examinees had appeared in 1984. So far 548 candidates had been awarded Ph D Degree and 6 DLitt. The University is a residential-cum-affiliating one and provides higher education to Gwalior and Chambal Divisions of Madhya Pradesh.

The University will start courses in Library Science, Biochemistry and also M.Phil. from July 1984. 45 colleges of this region are affiliated to this University besides the Schools of studies of the University. A "Kabi Sammelan" was arranged at this occasion.

Gujarat Vidyapith's programme on Indian Culture and Gandhian Thought

Gujarat Vidyapith has a programme for foreign students under College Semester Abroad to help them in undertaking independent study projects on Indian Culture & Gandhian Thought. The duration of the study is 10 weeks.

This year on February 12, a group of six students came and stayed upto 2nd May 1984. This was the 15th batch. They all adapted to the Gandhian way of life during their stay by putting on Khadi and participating in spinning, prayer and community life of the campus. They stayed at the rural campus in village Sadra. They studied the functioning of Co-operative movement particularly Co-operative Banks in rural areas and Amul dairy and Agriculture University campus of Anand.

Various lectures, seminars and group discussions on Gandhian philosophy, Rural development planning, Indian Religions, History and Culture, Indian Society etc. were organised for this team. The students wrote on subjects like philosophy and approach of 'SEWA', System of Education at 'LOKBHARATI', Swaminarayan sect: Life of the Saints.

Shastri Indo-Canadian Institute announces Social Sciences & Humanities Fellowships

Two fellowships have been established for Indian scholars in Social Sciences and Humanities to do research/study at a designated university in Canada for one academic term. The fellowships are to be held from 1 January 1985. The candidate for the fellowship should be a scholar at the middle level of his/her career stream and: (a) with proven ability for research and teaching; (b) who will concentrate on a specific project of study in Canada from a comparative perspective on Canada-India topics; (c) with a reasonably clear plan of work during the visit indicating the intention to continue work in the same area on return to India; (d) preference will be given to candidates demonstrating a genuine interest in the project and with prior work and experience in the area.

The Institute will bear the cost of travel of the selected scholar to and from the designated university (shortest economy/excursion airfare) besides a maintenance grant of $1,500.00 p.m. for a maximum period of four months and a lump sum of $500.00 for purchase of books, warm coat, overshoes, etc.

Applications on the prescribed form should be made to the Head of the institution who will nominate the candidate.

The nominations are to reach the Shastri Indo-Canadian Institute, 92 Golf Links, New Delhi by 31 July 1984. Ths nomination should be accompanied by **seven copies** of the application with **equal** number of plan of research/study.

NIEPA organises programme for Registrars

The National Institute of Educational Planning and Administration is organizing a programme on 'Innovative Approaches to University Administration'. The programme sponsored by the UGC, has been specially designed for the Registrars. The programme visualizes to identify the problems of university administration and enhance the capabilities for optimizing the available resources in manpower, materials, and space etc. Various sessions designed in the programme intend to deal with innovations in organizational and personnel structure, office mechanization and computer applications, forms design and control, inventory management, management of change etc. The faculty is being drawn from well known educationaiists, experienced university administrators and practising management consultants.

Sanskrit Institute at Varanasi

At a meeting held at Raj Bhavan, Lucknow, recently under the presidentship of Governor of Uttar Pradesh, Mr C.P.N. Singh, a decision was taken to establish an International Institute for Sanskrit and allied studies at Varanasi. The Institute will provide for study of all important classical languages and encourage scholars of languages to translate and transmit the ideas contained in literatures of various languages. It will have a wing for the production of Sanskrit literature. A journal is also proposed to be published.

The institute will be autonomous and will be fully financed by the Central and State Governments. The approximate expenditure on the Institute in the next five years is expected to be Rs. 10 crores.

Cultural fete at Jammu

Jammu University recently organised a cultural fete. The 3-day fete was inaugurated by the Vice-Chancellor, Prof M.R. Puri. In his inaugural address the Vice-Chancellor observed that "the students possess much potential for creative activities. Only they have to be given the proper direction to enable them to articulate their abilities in an organised and disciplined manner."

The cultural fete organised by the Campus Cultural Committee in collaboration with the Department of Youth Welfare and the Students Cultural Council was managed entirely by the students which enabled them to develop the fullest sense of participation.

AIU Book Exhibition

The AIU displayed its publications on the occasion of various conferences held at Vigyan Bhawan, New Delhi.

(i) Conference of Vice-Chancellors: May 21 & 22, 1984.

(ii) Conference of State Education Secretaries: May 23, 1984.

(iii) Conference of State Education Ministers: May 24, 1984.

The exhibition was much appreciated. Shri C. Aranganayakam, Minister for Education, Government of Tamil Nadu and Shri F. Malsawma, Minister for Education, Government of Mizoram, to name a few, visited the AIU stall.

BSW & MSW courses at Institute for Social Sciences Research

The Executive Committee of the Institute for Social Sciences Research, Vellore (Tamil Nadu) has decided to introduce a 3-year integrated diploma course of bachelor level in Social Work (BSW) w.e.f. the year 1984-85. This will be in addition to the existing 2 years course of Master of Social Work.

The proposed 3-year integrated course will be the first in Tamil Nadu which would impart professional training primarily in rural, urban and tribal social work.

A sub-committee has been formed to formulate the course curriculum. The course is scheduled to begin by the middle of June, 1984.

Rs. 17-crore block grant to six universities in A.P.

It is reported that the State Government has sanctioned the payment of block grant to six universities in Andhra Pradesh. Osmania University will receive Rs. 779.08 lakhs; Andhra University will receive Rs. 511.14 lakhs; Sri Venkateswara University is to get Rs. 258.47 lakhs; the Kakatiya University is to get Rs. 106.50 lakhs; Nagarjuna University Rs. 79.14 lakhs and Sri Krishnadevaraya University, Rs. 58.25 lakhs. These are payable in four quarterly instalments during the year 1984-85.

New medical college in Karnataka

The State Cabinet of Karnataka is reported to have taken a decision recently to permit the Al-Ameen Charitable Fund Trust to open a medical college in Bijapur. The college will charge capitation fee for admissions. This will be the ninth such private medical college in Karnataka. There are also six medical colleges in the State that do not charge a capitation fee.

The State Government has already taken a decision for abolishing capitation fee system within a period of five years. The new college in Bijapur will be bound by these rules and would have to stop collecting capitation fee in the next four years.

The capitation fee permitted by the Government for a seat in a medical college is Rs. 60,000 for a student from Karnataka and Rs. 1.60 lakhs for a student outside the State.

New deptts. and courses at Manipur University

Manipur University will have three new Departments with effect from July 84 : (i) Anthropology, (ii) Commerce and (iii) Earth Sciences in addition to the existing ten Departments. It is also proposed to offer 11 one-year Post-Graduate Diploma Courses from the next academic session. They are : (i) Public Administration, (ii) Business Management, (iii) Teaching of English/English Studies, (iv) Banking, (v) Insurance, (vi) Educational Administration, (vii) Fishery, (viii) Electronics, (ix) Computer Programming, (x) Labour Laws and (xi) Biological Techniques. Besides, a six-week intensive certificate course will also be opened by the University during the summer vacations in the following subjects : French, German, Russian, Chinese and Sanskrit.

News from Agril. Varsities

PAU workshop on kharif fodders

Dr R.S. Grewal, Director of Animal Husbandry, Punjab said that more research work on the development of high-yielding varieties of fodder crops should be taken up. He further said that the milch animals were not getting nutritious fodder in desired quantity resulting in low milk yield especially during summer. He called upon the scientists to devise suitable technology to utilize wheat and paddy straw as a nutritious cattle feed. Dr. Grewal desired that the farmers should maintain only high producing buffaloes and hybrid cows for higher milk yield and do away with un-economic animals.

Dr. Grewal was inaugurating a State-Level workshop on Kharif Fodder Production and Conservation at the Punjab Agricultural University recently. More than one hundred field officers of the Animal Husbandry Department attended the Workshop.

Dr. Khem Singh Gill, Director of Research of the PAU said that area under fodder crops had decreased from 17 per cent to 14 per cent and the production of fodders could only be increased by producing more fodder per unit area. Giving the details of the research work being done on the fodder crop, Dr. Gill told that a new variety of fodder crop known as PBN 83 was being developed which gave six cuttings of fodder during Nov. to April. Dr Gill told that specific research work on the fodders of Kandi area was being conducted at the Kandi research station at Ballowwal in Hoshiarpur District.

'Rituraj'—A new brinjal variety from Pantnagar

The vegetable breeders of the Pantnagar University have developed a high yielding wilt-resistant variety of round fruited brinjal, named "Pant Rituraj".

Besides commanding consumer preference due to its bright, deep purple coloured fruits, 'Pant Rituraj' has also outyielded the popular varieties Pusa Purple Round and T-3 by giving an average yield of 300 Q./ha. in multilocation testing and demonstrations.

The variety which has since been released for cultivation in the state by U.P. Variety Release Committee, is suitable for rainy as well as summer season and as such can be sown in nursery from middle of May to first fortnight of June for rainy season and second fortnight of January for spring-summer crop. It responds favourably to high doses of Nitrogen. For better performance, 60 kg. N should be applied alongwith 80 kg. P and 40 kg. K as basal dose and 60 kg. N should be top-dressed in two split doses 20 and 40 days after transplanting.

The first picking can be had in 60 days after transplanting by ensuring plant protection measures against Jassids and foliar insects by 2-3 sprays of 0.2% Thiodan.

Tribal scheme at Champakad

Kerala Agricultural University has launched a programme with financial support from the Department of Environment, Government of India to restore the degraded environment at Champakad Tribal Colony area. This colony is situated in the rain shadow region of the eastern slope of the Western ghats on the Udumalpet-Munnar road.

Under the scheme a nursery was established at the colony site to produce the seedlings of Emblica officinalis (Nelli), Tamarindus indica (tamarind), Terminalia chebula (Kadukka) for the future planting.

K.A.U. had already distributed planting materials of different crops and the tribals had a bumper harvest of vegetables this year.

Winter maize picking up in Punjab

The Directorate of Extension Education of the Punjab Agricultural University in collaboration with the Department of Agriculture, Punjab organised recently a winter maize field day at Shahpur, 25 km. from Ludhiana. Dr. Sukhdev Singh, Vice-Chancellor of the PAU presided over the function.

While addressing a large gathering of farmers, Dr. Sukhdev Singh said that winter maize was a boon for the farmers as it had a yield potential which was more than that of wheat. He said that maize was used for preparing poultry and cattle feed and was also purchased by the starch mills for industrial purposes. The Vice-Chancellor said that by setting up small poultry and cattle feed units and more poultry and dairy farms in the rural areas, rural youth could be provided more job opportunities.

The Vice-Chancellor pleaded that like wheat and paddy adequate marketing system for winter maize should be made and the farmers assured a remunerative price for their produce.

Dr. K.S. Nandpuri, Director of Extension Education of PAU said that timely sowing of winter maize, proper plant protection measures and fertilizers could enhance the yield of this crop. He exhorted the rural youth to work for the improvement of rural economy and launch a campaign against social evils.

Dr. A.S. Khera, Senior Maize Breeder of the PAU said that per acre yield of winter maize was between 25 to 30 quintals which was more than that of wheat. A yield of 40 qtls. per acre was possible if the crop was sown according to the PAU recommendations. Other experts spoke on the sowing, plant protection, weed control, fertilizer and irrigation and harvesting of this crop.

Mr. A.S. Deepak, Director of Marketing, Punjab said that adequate arrangements of kharif seeds and fertilizers had been made to meet the needs of the farmers.

Sports News

Salient Features of Sports Policy

The Government has finalized a 16-point national sports policy to impart momentum to this important national activity in the wake of the enthusiasm generated by the recent ninth Asian Games throughout the country, it is reported.

Hitherto, sport has been treated as part of the national policy on education formulated in 1968.

As part of the sports policy, approved recently by the Union Cabinet, it is proposed that a portion of the national income be set apart for sports. The eventual figure could even be 1% of the country's gross national product.

The following are the 16 aspects of the policy:

1. Development of infrastructure in villages and towns so as to provide them with the minimum facilities such as playgrounds, indoor halls and swimming pools;
2. Preservation of playfields and open spaces;
3. Ensuring an adequate diet for sportsmen and women;
4. Launching all-out efforts to identify and nurture young talent;
5. Making sports an integral part of the school curriculum;
6. Taking steps to establish sports universities, colleges, schools and hostels;
7. Provision of adequate incentives to sportsmen;
8. Giving special consideration to sportsmen in employment;
9. Encouragement of voluntary efforts for promotion of sports;
10. To ensure India's participation in international competitions;

(11) Giving international exposure to only those with required standards;

(12) Giving priority to those disciplines recognised for the Olympics, the Asian Games and the Commonwealth Games and other internationally recognized games for which a world federation exists;

(13) Promoting the sports goods industry for making available equipment and its customs-free import;

(14) Ensuring active participation and support from nonfunctional institutions, institutions in finance, infrastructure and organization;

(15) Encouraging research and development in sports;

(16) Effective use of media to propagate national consciousness of the importance of sports.

Scientific study of athletes suggested

Physical and sporting activities by athletes should be undertaken only after a careful scientific study of the bones and joints as also adequate training and limbering up exercises, according to an eminent French sports doctor, it is reported.

According to Dr. Fransisque Commandre, strict supervision must also be carried out among children and adolescents whose skeletons are immature and fragile before they take up competitive sport.

Writing in a recent issue of the Olympic Review, an official publication of the Olympic movement, Dr. Commandre expresses the view that "the apprenticeship must be progressive and protected by training and medical supervision."

He says that sports equipment must be designed in such a way that it emphasizes on the preventive aspects in the context of injuries sustained by athletes. This can be achieved through a close collaboration among coaches, athletes, doctors, engineers and biomechanic specialists.

Dr. Commandre says young people and, above all, adolescents bringing an immature skeleton to sports practice must be given a rigorous aptitude test.

Those who intend to go into the top level of sport must, among other things, work to build up protective muscle, shrouding the spinal column, producing protective cushions and acquire excellent physical condition on a personal rhythm by gradually building up without excess and modulating the bio-constraints.

They should also limber up, fight against stiffness in the joints, muscular retractions, achieving stretches and postures, to be practised before "serious" warm-up, in a slow, progressive manner and by respecting the psychological norms.

Dr. Commandre says the role of a sports medicine specialist is essential, but very difficult in prevention of attacks on the locomotor apparatus arising from sport.

According to him, the doctor has to select, warn, inform, guide and supervise an athlete besides dealing with a child who wishes to take some sport or other and to get an injured athlete back to form.

He should also help a patient who wishes to maintain a certain level in sport and at the same time lead a comfortable life.

GNDU annexes Maulana Azad Trophy

The Guru Nanak Dev University won the Maulana Abul Kalam Azad Trophy for the year 1980-81 and 1981-82 for the fifth year in succession, announced by the Ministry of Education and Social Welfare, Govt. of India. This trophy, instituted by the Ministry of Education, Govt. of India, is awarded to a University which secures highest points in the field of sports in International, National and Inter-University tournaments on the recommendations of the Association of Indian Universities.

The Guru Nanak Dev University annexed this top honour on the basis of the overall best performance during the sports year 1980-81. The University won six Inter-University tournaments in Athletics (Men), Gymnastics (Men), Gymnastics (Women), Volleyball (Women), Football and Hockey (Men), three Runners up positions in Boxing, Badminton (Women), Basketball (Women) and Water-polo in 1980-81. Fourteen athletes/players represented the country in the various International competitions during this year. Twenty-two NSO scholarships @ Rs. 1200/- p.a. were awarded to the outstanding sportsmen and women of this University.

During the year 1981-82 the University won four all-India Inter-Varsity Tournaments in Athletics (Men), Basketball (Women), Gymnastics (Women) and Weight Lifting, Six Runners-up positions in Basketball (Men), Athletics (Women), Gymnastics (Men), Hockey (Women), Cricket (Men) and Cricket (Women) while the University won five third positions in Boxing, Badminton (Women), Wrestling, Volleyball (Women), Football. Ten outstanding sportsmen and women of this University represented the country in the International competitions during this year. Thirty-three NSO scholarships were awarded to the outstanding players/athletes of this University.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

SOCIAL SCIENCES

Sociology

1. Barod, Premlata. *Indore Jile mein karyarat mahilaon kee parivarik samasyaen*. Devi Ahilya, Indore. Dr. V.C. Tongia.

2. Ghugaro, Suryakant Balasaheb. *Veershaivism in Maharashtra: A sociological analysis with special reference to Kolhapur District.* Shivaji U, Kolhapur. Dr. A.D. Madgulkar.

3. Menon, Manorama. *Ecological imbalances and their effect on environment and the socio-economic life of the people.* Devi Ahilya, Indore. Dr. W.S.K. Phillips.

Social Anthropology

1. Awasthi, Bhavneshwar Prasad. *Education and social change in the Gaddi Tribe: A comparative study of educated and non-educated Gaddis.* Pb U, Chandigarh. Dr. J.C. Sharma and Dr. S.L. Sharma.

2. Bandyopadhyay, P.K. *Leadership pattern in Mizo society : A study of three-Mizo villages.* Gauhati U. Dr. D.N. Majumdar.

3. Medhi, B.K. *The Assamese Sikhs: A study on their social relations in a rural situation.* Gauhati U. Dr. A.N.M. Irshad Ali.

Social Work

1. Jacob, Z. Thudipara. *Personnel and personnel administration in rural development.* Devi Ahilya, Indore. Dr. W.S.K. Phillips.

Political Science

1. Beg, Ismail Ali. *Gut Nirpeksh Andolan kee alochanatmak vivechna kasvokal.* 1979-83. Devi Ahilya, Indore. Dr. S.S. Bagga.

2. Sharma, Chandrakala. *Bhartiya swadheenta sangram mein Paschimi Nimad Kshetra ka yogdan: Dhar Rajya ke sandarbh mein*, 1885-1947. Devi Ahilya, Indore. Dr. S.S. Bagga.

Economics

1. Mulani, K. Tayyab Kasim. *An economic study of famine affected villages of Sangola Taluka in Solapur District of Maharashtra.* Shivaji U, Kolhapur. Dr. V.B. Ghuahe.

2. Shaha, Rupa Shantilal. *A study of integrated rural development programme in Kolhapur District.* Shivaji U, Kolhapur. Dr. R.R. Doshi.

Law

1. Bhajan Kaur. *The problem of polygamy and its changing perspective under the Personal Law of India: A socio-legal study.* Pb U, Chandigarh. Prof. Virendra Kumar.

2. Chauhan, Jai Krishan. *Government contracts: A study of constitutional and legal obligations.* Pb U, Chandigarh. Dr. B.K. Gupta.

3. Kang, Ranbir Kaur. *Trade union democracy and Industrial Relations Law in India : A study of implications in India.* Pb U, Chandigarh. Dr. Y.K. Tewari.

4. Pushpinder Kaur. *Women labour in India: A socio-legal study.* Pb U, Chandigarh. Dr. Y.K. Tewari.

Education

1. Gurbaksh Singh. *Performance in volleyball as related to selected psychological variables and relaxation.* Pb U, Chandigarh. Dr. (Mrs.) S. Bambah.

2. Phothiclung, Chanchai. *Assessment of physical fitness of lower secondary school boys of Thailand.* Pb U, Chandigarh. Dr. N.N. Mall.

3. Reet Mahinder Singh. *Physical fitness norms of Panjab State high school boys.* Pb U, Chandigarh. Dr. N.N. Mall and Dr. N.N. Pangotra.

4. Singh, Usha. *Job satisfaction of the physical education teachers as related to their role expectations.* Pb U, Chandigarh. Dr. (Miss) S. Bhuller.

5. Thombare, Vidya Vasudeo. *A critical study of the ashram schools in the state of Maharashtra with special reference to Kolhapur and Satara Districts.* Shivaji U, Kolhapur. Dr. M.G. Mali.

Commerce

1. Darmiah Nadar, R. *Employee benefits in the road transport undertakings of the Government of Tamil Nadu.* Madurai. Dr. R. Neelamegam.

Management

1. Dhuna, Mukesh. *Perception of computers in banking industry.* MDU, Rohtak. Dr. R.D. Pathak.

HUMANITIES

Philosophy

1. Maheshwari, Archana. *The Gita's synthesis of Yoga in the light of Sri Aurobindo.* BHU, Varanasi. Prof. L.N. Sharma.

2. Vijayal, K. *Indian theories of error: A comparative study.* U Ker, Trivandrum. Dr. K.Sawatchandran.

Language & Literature

English

1. Damabi, Sohrab Mirzaei. *Treatment of death in Ernest Hemingaway's fiction.* Pb U, Chandigarh. Prof. (Mrs.) Nirmal Mukherji.

Sanskrit

1. Gurmukh Singh. *A study of Advaita in the Yoga-Vasistha.* Pb U, Chandigarh. Prof. R.M. Sharma.

2. Ravinder Nath. *A critical and comparative study of the Vyavahara Mayukha of Nil Kantha Bhatta.* Pb U, Chandigarh. Dr. V.P. Upadhyaya.

3. Sharma, Surinder Kumar. *Bharatparijatam ka alochnatmak adhyayan.* Pb U, Chandigarh. Dr. Anirudh Joshi.

4. Yash Pal Singh. *Maintenance of aucitya in Kalidasa's works.* Pb U, Chandigarh. Dr. Shiv Prasad Bhardwaj.

Punjabi

1. Baljit Singh. *Critical study of punjabi lexicons.* Pb U, Chandigarh. Prof. Attar Singh.

2. Harjit Kaur. *Punjabi sahit vich uplabdh Gostan da alochnatmak adhyayan.* Pb U, Chandigarh. Dr. Darshan Singh.

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4. Iqbal Singh. *An analytical study of origin and growth of folk dances of Panjab.* Pb U, Chandigarh. Prof. Attar Singh.

5. Jasbir Kaur. *Punjabi Sufi kav vich istri da sarup : Sheikh Farid, Shah Hussain te Bulhe Shah de vishesh prasang vich.* Pb U, Chandigarh. Prof. Attar Singh.

6. Maninder Kaur. *Shah Hussain da bimb vidhan.* Pb U, Chandigarh. Dr. Kuljit Shelley.

7. Manjit Kaur. *The architechtonics of Guru Nanak Dev's poetry.* Pb U, Chandigarh. Dr. Darshan Singh.

8. Raghbir Singh. *Pragtivadi sahitdhara de antargat Prof. Mohan Singh, Bawa Balwant te Amrita Pritam dee kavita da alochnatmak adhyayan.* Pb U, Chandigarh. Dr. Raghbir Singh.

9. Subhash Chander. *The sociology of punjabi novel from 1950 to 1970.* Pb U, Chandigarh. Dr. Kesar Singh Kesar.

Hindi

1. Agnihotri, Dev Dutt. *Narender Kohli ke katha sahitya mein Bhartiya sanskritik chetna.* Pb U, Chandigarh. Prof. D.D. Maini.

2. Bajaj, Ajay Kumar. *Saptkeeya kavya mein chhayavadi tattva.* Pb U, Chandigarh. Dr. Jaya Parakash.

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9. Vyas, Usha. *Nai kavita mein saundarya vidhan.* Devi Ahilya, Indore. Dr. S.S. Vyas.

10. Wali, Mukta. *Rashtriya-sanskritik kavyadhara ke sandarbh mein Maithilisharan Gupta aur Ramdhari Singh Dinkar ke kavya kee tulna.* Pb U, Chandigarh. Dr. Laxmi Narain Sharma.

Geography

1. Qureshi, Sheikh Kadir. *Industrialization and regional development : A case study of Ujjain Division.* HS Gour. Dr. S.K. Shukla.

History

1. Charan, Philip. *Mahatma Gandhi ka asprishyta nivarau mein yogdan.* HS Gour. Prof. B.N. Sharma.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Library Science

1. Awad, Atef Kamal. *An optimum algorithm in subject indexing systems.* U Delhi.

Psychology

1. Ananthasayanam, R. *Socio-psychological study of planned parenthood with reference to ideals, perceptions and attitudes of male out-of-school youth in rural areas of Chingleput District in Tamil Nadu.* U Madras.

2. Dinesh Kumar. *A psychological study of intelligence and intellectual stimulation received by the students studying in different types of junior high schools in Tarai Area, Nainital, U.P.* Kum U, Nainital.

3. Gangopadhyay, Mihirkumar. *Social psychological determinants of the migratory rural students and their adjustment problems.* U Calcutta.

4. Pande, Pratibha. *Suggestibility in dysthymic and hysteric patients and normals.* U Madras.

5. Paul, M.T. *Managerial effectiveness and motivation, leadership personality and organisational climate.* U Madras.

6. Sharma, Umesh. *A study of organizational effectiveness as determined by motivational and personality patterns.* U Raj, Jaipur.

7. Sulochana, P.V. *Creativity in women: A socio-psychological approach.* U Madras.

8. Umayaparvathi, S. *A study of achievement motivation, intelligence and literary attainment in some of the urban and rural women's literacy centres in Tamil Nadu and Pondicherry States.* U Madras.

9. Virudhagirinathan, R.S. *A study of the relationship between psychological and neurological functions in head injuries.* U Madras.

Sociology

1. Asari, V. Gopala Krishnan. *The implications of technological change for rural development in India: A case study in Kerala.* JNU, Delhi.

2. Birinder Pal Singh. *Decision making and power structure in Patiala City,* 1960-1978. Pb U, Chandigarh.

3. Chandramohan Reddy, T. *Rural leadership in Rayalaseema of Andhra Pradesh : A case study.* SVU, Tirupati.

4. Dobhal, G.L. *Development of hill areas: A case study of Pauri Garhwal District.* JNU, Delhi.

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7. Singh, K.B. *Bharat evam Nepal ke do parvatiya gramon ke samajik jeevan ka tulnatmak adhyayan.* Kum U, Nainital.

8. Srivastava, A.K. *Social class and family life: A sociological study of changing patterns of selected families in urban setting—Lucknow.* Kum U, Nainital.

9. Uma, K.C. *Dynamics of hindu family : A study of families among Madhavas in Bangalore City.* Bangalore U.

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Political Science

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2. Koteswara Prasad, Gundapuneni. *Gandhism since Gandhi: A study in the philosophy and movement.* U Madras.

3. Madhusudan, Mallavarapu. *The reconciliation of liberty and authority in the political thought of Bertrand Russell* 1872-1970. Andhra U, Waltair.

4. Malpani, Beena. *Bharat-America ke rajnaitik evam arthik sambandh* 1966-76. Jiwaji U, Gwalior.

5. Paricha, Amiya Kumar. *Electoral behaviour and political change in Parlakhemundi : A case study.* Andhra U,Waltair.

6. Roy, Pradip Kumar. *Personnel administration of North East Frontier Railway.* Gauhati U.

7. Samuel, R. Stephen. *Film and politics in Tamil Nadu,* 1947-1980. U Madras.

8. Surendra Narayan. *Interest articulation and the political system: The case of the Federation of University Teachers' Association of Bihar.* Mag U, Bodh Gaya.

Economics

1. Dangat, Sonopant Bhaguji. *Farm income stabilization in dry farming areas of Ahmednagar District of Maharashtra.* MP Krishi, Rahuri.

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Public Administration

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Education

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8. Rokeya Khanam, *Performance of high school students in biology as a function of personality types and instructional designs for concept and rule learning.* Pb U, Chandigarh.

9. Sharma, Promila. *Leisure time activities of college students of Delhi: A sociological study.* JNU, Delhi.

Commerce

1. Dube, Rasiklal. *Madhyapradesh ke suti vastra udyog kee shram samasyaen evam shram sanghon ka yogdan.* Devi Ahilya, Indore.

2. Mohd Moinuddin. *Depreciation accounting : A study of practices of Indian business.* Kum U, Nainital.

3. Mohammad Murtuza. *An appraisal of the working of Industrial Development Bank of India,* 1964-80. U Bihar, Muzaffarpur.

4. Prabhakara Rao, Devisetti. *Human resource accounting: A case study of Hindustan Shipyard Limited, Visakhapatnam.* Andhra U, Waltair.

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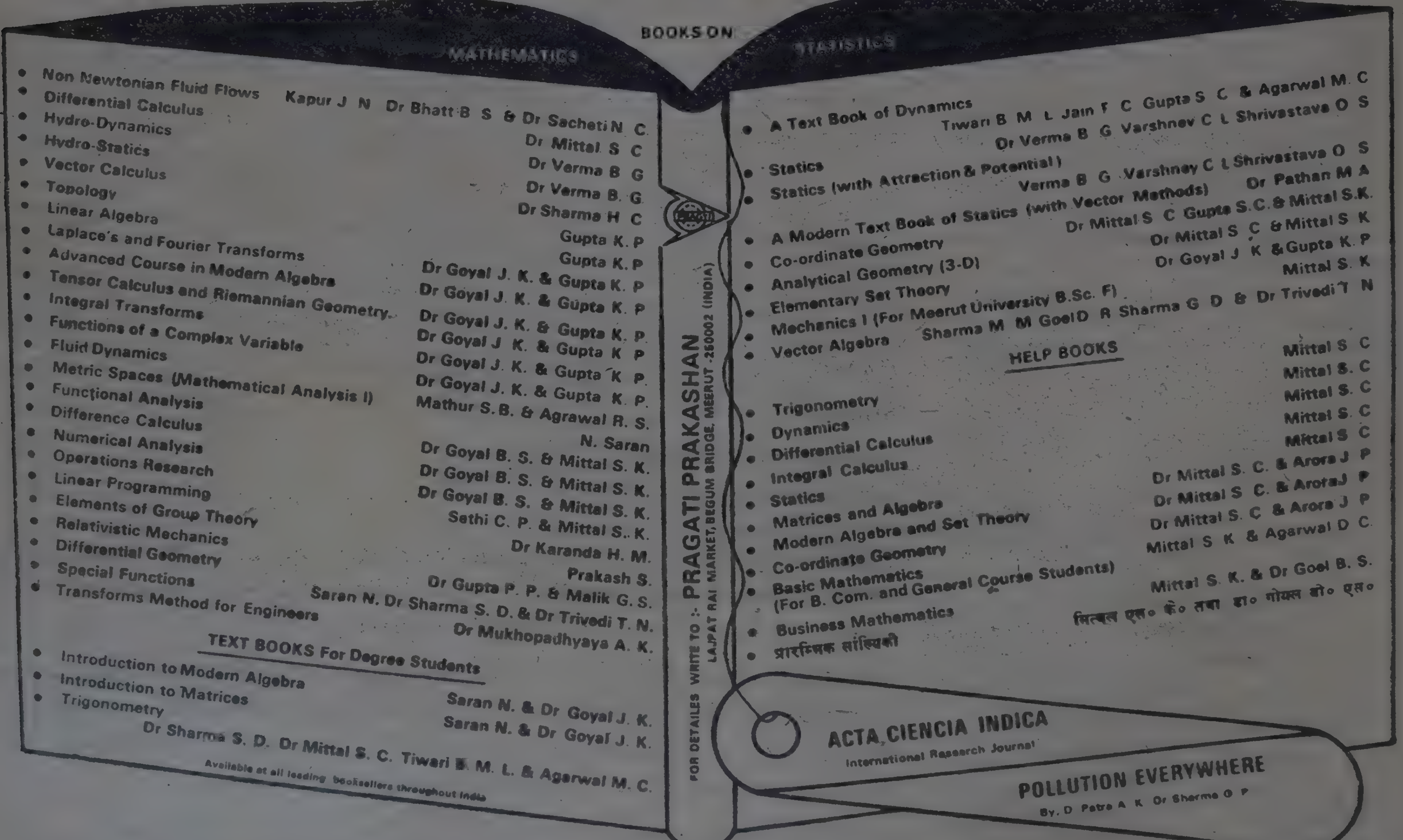
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ACTA CIENCIA INDICA
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POLLUTION EVERYWHERE
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Advertisement No. 2/84

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A.R. Chauhan
REGISTRAR

UNIVERSITY NEWS, June 1, 1984 Regd. No. R. N. 7180/63 Post Regd. No. D(C)-1086

SAURASHTRA UNIVERSITY

University Campus, Kalawad Road
RAJKOT-360005

Applications in the prescribed forms are invited for the undermentioned posts. Application forms alongwith detailed requirements of qualifications and experience for these posts will be available from the Registrar, Saurashtra University, University Campus, Kalawad Road, Rajkot 360 005, on sending a self addressed envelope of the size 23 x 11 cms with postage stamps worth Rs. 1.90 p.

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2. Lecturer—1

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The candidates already in employment must submit their applications through their present employers. Those knowing Gujarati and/or Hindi will be preferred. The candidates will have to travel at their own cost if called for interview.

V.M. Desai
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(b) Diploma/M. Phil in Medical & Social Psychology from a recognised University/Institute; and

(c) About 3 years experience of teaching/research.

Desirable : 3 years Clinical/Research experience.

Age : Below 40 years.

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DIRECTOR

DEVI AHILYA VISHWAVIDYALAYA, INDORE

University House, INDORE-452 001

No. Estt./III(2)/84. **Dated : 17-5-1984**

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I.S. Mehta
REGISTRAR

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University News

UNE 8, 1984

Re. 1.00

Prime Minister, Smt. Indira Gandhi, receiving a set of books from Acharya Prya Vrata Vedawachaspati, Ex-Vice-Chancellor, Gurukula Kangri Vishwavidyalaya on May 16, 1984.

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25 JUN 1984
MYSORE

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Editor :
M.S. RAMAMURTHY

A Study in Vedic Polity

Acharya Prya Vrata Vedawachaspati, Ex-Vice-Chancellor of the Gurukula Kangri Vishwavidyalaya, Hardwar, presented to the Prime Minister Smt. Indira Gandhi his book "Vedonke Rajneetik Siddhant"—(A study in Vedic Polity) at a special function held at the residence of the Prime Minister on May 16, 1984. The book is an original research work and is divided in three parts, namely, Samvidhan Kand (Constitution of the State). Abhyudaya Kand (Welfare of the State) and Pratiraksha Kand (Defence of the State). It is based on the original four Vedic Samhitas alone and deals with the entire compass of the political thought found in the Samhitas. The book presents in clear and lucid terms the theory and practice of statecraft described in the Vedas. Many of the political principles propounded in the Vedas are such as can be very useful even to the modern political world. The book is the result of the author's labour and research extending over more than twenty five years and is a contribution by the author and the Gurukula Kangri Vishwavidyalaya to the Vedic literature. No such other work is available in the entire Vedic literature.

The Prime Minister praised the publication of this new and original work on the Vedic Political Science and gladly accepted it as a present to herself by the author and congratulated the author on bringing out this rare book. She also honoured the author by offering him a shawl and spreading it on his shoulders. On this occasion the Prime Minister said that the Vedas were a treasure house of very lofty teachings that contained truth which could be availed of with profit not only by our own countrymen but by humanity at large. She exhorted the scholars to continue their studies and research in Vedic scriptures with greater perseverence so that the ideals of our ancient culture are brought before the public and its useful values are preserved for the benefit of the present and future generations. She also asked the scholars to interpret and explain the ancient texts in simple and clear language. The function was attended by a large number of scholars, professors and functionaries of the Arya Samaj.

Panel to Study Structure of Polytechnic Education

The All-India Council of Technical Education at its meeting held on 29th May, 1984 decided to appoint an expert committee to study the structure of polytechnic education in the country. The committee, inter alia, would decide whether the duration of study in the polytechnics should be extended by another year consequent on the introduction of the 10+2 pattern and considering that qualified engineers no longer did the kinds of jobs they were doing four years ago.

Speaking to newsmen, Shri M. S. Srinivasan, Joint Educational Adviser for Technical Education to the Govt. of India in the Ministry of Education said that it was also decided to appoint a working group to consider the need for setting up a National Pharmaceutical Institution to improve the standard of pharmaceutical education in the country.

Recently the Government had also appointed a committee to go into the question of starting a model polytechnic in every state.

Aspects of India's Development Strategy for 1980s

Prof. S. Chakravarty, Chairman, Economic Advisory Council, Planning Commission, delivered the Fifth G.L. Mehta Memorial Lecture (Instituted by ICICI Ltd., Bombay) on 26th April, 1984 at the Indian Institute of Technology, Bombay. The text of his address is given below.

I consider it a great privilege to have been asked to deliver the G.L. Mehta Memorial Lecture. I have chosen on this occasion to speak on certain aspects of India's development strategy, not only because of my more than a decade long association with the planning process, but also because it may be recalled that the late G.L. Mehta was one of the very first group of distinguished people who were appointed by Pandit Nehru to serve as a Member of the Planning Commission.

(1) Since the inception of the planning process with which Mr. Mehta was personally associated, more than thirty years of experience have accrued in regard to the operation of a planned system operating in a pluralistic environment. Several scholarly efforts have been made to assess the nature and significance of this experience of which probably the most ambitious one till today has been furnished by Gunnar Myrdal in his "Asian Drama." This book, curiously enough, is treated more often as a finished monument than as a quarry from which valuable elements can be gleaned for closer examination. It is a remarkable fact that Myrdal's critique has been overshadowed by a far more narrowly focussed criticism emanating from a resurgent neoclassicism with its explicit avowal of the efficiency of the market mechanism and a strident advocacy of the minimal state. Perhaps, reason for this is to be found in a general shift of intellectual climate to the right, especially in the United States and, to a lesser extent, in the West European countries. Myrdal's criticism reflected the dilemmas of a European social democrat who looked at the development problem of Asian countries with an explicit set of value premises which were derived from the European enlightenment thought. The critics who have followed him have mostly looked at the problem of Indian development from a much narrower economic perspective, and that, too with a trade theoretic bias, which by its very nature is of limited value in judging the transformation problems of a country of the size of India. However, my intention here is not to attempt a review of these reviews, although that woud be of some interest. Rather, what I would like to offer here is my own assessment of the nature of the development strategy followed by India so far and of the changes it broadly requires in the decade of the nineteen eighties. I try to avoid polemics as they detract attention from the crucial issues that face us today.

(2) Indian development strategy as it evolved since the mid-fifties had largely been predicated on the basic understanding that the prime need before the country was to accelerate the rate of material capital formation. It was widely believed that the limiting factor in this regard was the shortage of savings. Mahalanobis added a major twist to the argument when he pointed out that the shortage of savings was mirrored in the inadequacy of the production of capital goods, an argument that would be strictly true only in a closed economy where wages were paid out at the end of the production period. His recommendation to step up the rate of expansion of capital goods as a solution to India's stagnation was a 'structuralist' one, not differing in spirit from similar recommendations made by the Latin American economist Prebisch although argued out from a somewhat different theoretical position.

Subsequently, the limitations of his argument were much emphasized but these consisted in pointing out the advantages of following an appropriate pattern of international division of labour, a factor which he did not explicitly consider although it was very much implicit in his argument. While this criticism has found many advocates, both at home and abroad, the crucial factor which seemed to have led to a diversion from the strategy in the mid-sixties was the growing proneness of the economy to inflation, in itself based on the failure of agricultural supply to match the demand that was being placed on it due, in part, to efforts at accelerating industrialization, and, to a greater extent, on the slowdown of acreage expansion in agriculture and population growth.

Once again, the savings shortage was re-established in the forefront of discussion although with a different physical emphasis. Considered statically, this meant that the supply of wage goods was relatively inelastic and constituted the crucial bottleneck to growth. Dynamically, the source of the crisis was found to lie in the disproportionate rates of growth of industry and agriculture. The situation changed briefly towards the end of the sixties and the early seventies (1969-71), and once again, during the years 1976-78, when India seemed to experience problems of domestic absorption, which were reflected in the growth of publicly held grain stocks and also in the accretion to the quantum of foreign exchange reserves. Investment in fixed capital construction was, however, sluggish, leading people to fear that domestic market may also be a problem on achieving a reasonable rate of growth.

In both cases, these worries were soon overshadowed by violent fluctuations in exogenous variables, such as highly unfavourable weather conditions in 1972-73, 1979-80 and 1982-83, as well as by sharp adverse movements in the external terms of trade. Interestingly enough, while these events led to sharp price increases, reduced rates of output growth, savings rates were not significantly affected, a phenomenon that has not been fully explained so far.

It is a noteworthy fact that over the entire period 1950-80, national accounts suggest a significant increase in the domestic savings rate as a proportion of gross domestic product even when the increase in the level of per capita income has been a very modest one judged by the same set of statistics.

It is equally true that the type of shortage of labour and entrepreneurial skills that India faced at the time the country became independent is nowhere visible to the same extent.

Of the traditional development economists' arguments which claim to explain why a poor country continues to remain poor, it is only the limited capacity to import which seems to remain as a persisting phenomenon. Yet the moot question remains whether a sharp rise in the net inflow of foreign capital is all that India needs to achieve the needed acceleration in growth rates, even if one were to leave out questions relating to equity. This is a question which has acquired all the more urgency in the decade of the eighties.

While not underestimating the need to augment India's capacity to import, an issue to which I return later, I would first like to examine whether there is not a role for 'demand' as a factor constraining growth in a country like India. Clearly the issue is not a normative one. What we are looking for is whether demand understood as effective demand can affect not merely the composition but also the growth rate of production, even in a country like India.

(3) To begin with, it would appear to me necessary to state in a compact form the analytical basis of the widely held presumption that economic growth in a low income country is exclusively dependent on factors specific to the supply side.

First, it is held that as a low income economy, in general, is one characterized by a low volume of capital stock, relative to labour, the rate of return on investment on the margin must be necessarily high thus helping to keep the inducement to investment at a high level. This would appear to be the assumption underlying much neoclassical theorizing on growth.

Secondly, with or without the help of the Keynesian theory of consumption, it is maintained that the ratio of consumption to income must be necessarily high, leaving very little scope for savings. Taken together with the first reason, this will typically imply a level of aggregate demand which will press heavily on aggregate potential output thereby producing a situation on actual or incipient excess demand.

While the above two factors deal with the level of demand, there are two other factors which are supposed to help maintain a high rate of growth of demand. One of these factors refers to the rate of population growth which being fairly high in India is supposed to be a major factor behind the widening of markets, a point much emphasised in the context of theories of secular stagnation, once very much in the forefront of discussion in mature capitalist economies.

The other factors refer to what may be called the structural change in the mode of production which follows from the growth of commercialization in the economy, which leads to increased monetisation along with many concomitant changes.

The upshot of these arguments was that a labour-rich country once embarked on the path of capitalist industrialisation could be expected to show high rates of growth, at least for a considerable period of time, provided supply side bottlenecks could be removed on the way. Supply side constraints have been variously identified as the shortage of savings, shortage of foreign exchange, shortage of skilled manpower and shortage of entrepreneurial abilities.

While, as we have seen, during the fifties there was a consensus on this point, we have to enquire a little more carefully today whether the consensus was not an overly hasty one.

(4) The argument on the inducement to invest is clearly a weak one. Analytically, it was grounded on a theory of capital which has been found on critical scrutiny to be lacking in coherence, let alone plausibility. While this is not the place to go into a review of recent literature on a relatively abstruse subject, it is necessary to mention that even if one could define a way most of the objections to the concept of an aggregate capital-stock, the problem of inducement to invest will remain a formidable subject in its own right.

Given the presence of significant risk premia, and the high value attached to land and gold, it is by no means clear that a capital-poor country would be characterized by high rates of return on directly productive activities, especially in the absence of much complementary investment in social overhead capital. The second argument is a much more substantial one and, in a sense, forms the logical crux of the supply-side argument. Many capital-poor land scarce economies are characterized by what may be called a state of 'primitive stagnation', to borrow an expression used by the late Professor Joan Robinson. In such an economy, a great deal of net output, given the seed-yield ratio, accrues as rent which is very largely consumed. There is little capacity to save on the part of small peasant proprietors/share-croppers and others because of the small size of operational holdings. So far as the modern sector is concerned, it is much too small to change the overall dimensions of the savings-income ratio.

Such a situation can with some justification be regarded as a saving-constrained situation as any sudden increase in investment can lead to the price of consumer goods rising relatively to money wages thereby triggering off an inflationary spiral. Granted this, however, it is not clear that the story, quite a plausible one in itself, is best told in the form of causation running from savings to investment. It may be more appropriate to stress the reverse causal link running from investment to saving, in which case, the problem of demand appears, although not in the form of a simple tale of underconsumption. On the impact of population growth on the inducement to invest I cannot do better, within the present space to quote the following paragraph from Kalecki who put the argument with clarity and succinctness. He wrote, "It should be noticed that some authors have taken into consideration other channels through which growth in population may stimulate economic development. They have maintained that an increase in population encourages investment, because the entrepreneurs can then anticipate with some certainty of broadening of markets for their products. What is important, however, in this context is not an increase in population but an "*increase in purchasing power*". An increase in the number of paupers does not broaden the market. For instance, increased population does not necessarily imply a higher demand for houses; for without an increase in purchasing power the result may well be the crowding of more people into existing dwelling space". I have quoted the above paragraph from Kalecki because it states and illustrates what appears to me the most crucial point in regard to the effect of a steadily growing population on maintaining a regime of higher level of effective demand, i.e., the question of a steadily, increasing level of purchasing power. However, the proposition is on the face of it, a paradoxical one, because if increased population leads to increased output, then this should lead automatically to an increase in purchasing power, Kalecki, then would seem to be suggesting a state of affairs where additional availability of labour does not yield extra output or leads to a more skewed distribution of income.

The first situation can arise under conditions of self-employment if the marginal productivity of labour in traditional agriculture is zero or negative, a possibility which was at the centre of much theoretical discussion in sixties. However, such an extreme assumption is tantamount to assuming that land is an absolutely limiting factor and no alternative use of labour is permitted. In this case, however, the supply bottleneck is supreme and the situation is resource constrained rather than demand constrained. A somewhat milder set of assumptions, however, restores a role for demand. Assume that labour has a positive marginal product in industry but not in agriculture and also assume that labour is transferable between sectors. Further assume that the wage level is already at a subsistence minimum defined in terms of 'food'. Given *a minimum rate of profit*, then the supply price of industrial product in terms of the agricultural goods behaves like a 'fix price', in Hicksian sense. In this context, variations in industrial output will operate as in a demand determined system.

Industrial growth can be accelerated in this situation provided agriculturists' real income net of own consumption of 'food' can increase at a higher rate.

It is possible that such an increase in agriculture is not possible without a substantial increase in the absorption of industrial products by agriculture. This situation will then resemble the more classical arguments for a balanced growth of industry and agriculture. But if we allow for increasing returns to scale in industry, an element of cumulation is built in, which gives a greater role for demand in triggering off a growth spiral. The same thing can happen if exports show an unusual buoyancy and industry can be reorganized so as to take advantage of such a situation. A similar situation occurred in Japan during the eighteen nineties and more especially during the fifties and early sixties.

The argument is somewhat similar to Kaldor's recent argument on the importance of 'foreign trade multiplier'. However, my argument differs from Kaldor's in attaching relatively little importance to the point as to whether Say's law is voilated or not as there would appear to be a relatively little consensus as to what Say precisely meant. It differs from Nurkse's in so far as I believe that vertical linkages are more important than horizontal inter-commodity shifts in demand. It is also true that in some respects my argument is closer to the Smithian view of the demand process as compared with the more recent demand centred position such as that of Keynes. But it has at least three Keynes-like features: (a) failure of all markets to clear because of the inflexibility of real wages; (b) adjustments are brought about by changes in quantity rather than through prices; (c) an external market can lead to stepping up the growth rates.

If differs from the Keynesian argument because it is not money-wages that are rigid. Also, inter-industrial relationships are critical to the process.

However, the empirical plausibility of this model would appear to depend on the assumption that labour has a zero of negligible productivity on the margin in agriculture at the existing set of techniques. It is well known that this assumption has been questioned a great deal in more recent discussions with "empirically fitted" production functions regularly showing up results which contradict the postulate of a zero marginal productivity of labour in agriculture. However, it would appear that so long as the marginal productivity is substantially below the wage rate at which industrial sector employed labour and so long as the minimum supply price of capital is relatively high, the rate of growth of demand for industrial products coming from agriculture will prove a very important causal factor in securing a dynamic balance in a growing economy.

As mentioned already, we may like to say that what this argument does is to restate the traditional case for 'balanced growth', rather than a separate role for demand as a constraint on the entire growth process. Let us recall that within the context of the traditional balanced growth model, the overall rate of growth is determined by the capacity to save whereas only the composition of growth is determined by income elasticities of demand for different products.

What is being maintained in contrast is that both the rate and the composition are simultaneously determined, and that too as a part of a process where no pre-existing constraint on saving is being postulated. It is, however, not being asserted that an increase in monetary demand is all that is needed, a simplification that does not apply to our situation.

One may wonder at this stage whether the argument given here will not apply to the so-called 'classical model' of growth much popularized by Lewis. How did Lawis avoid the possibility that demand could be a constraint on growth? First, by mostly concentrating on the assumption that the capitalist sector is self-contained in the sense that it produces all the necessary commodities. There is no product exchange between the capitalist sector and the "subsistence" sector. Labour alone is imported into the industrial sector. In this case, which he calls model I, he could concentrate only on the question of labour supply and ignore the question of inter-sectoral trade. Thus, he eliminated the possibility that profits in industrial sector may be squeezed dry because of adverse movements in terms of trade. Furthermore, and also critical to the argument, profits equal savings which in his model are automatically reinvested. Thereby he avoids the problem of an independent inducement to investment. With low wages, in terms of food, unchanged terms of trade and an upwardly moving marginal productivity of labour function based on accumulation of petty capital, Lewis could with some reason argue that the whole development process consists in the fact that a low saving economy is transformed to a high saving economy. Thus, for him demand factors are not the inhibiting ones on the growth process. Neither underconsumption nor under-accumulation bothers him. What is essential for Lewis is that the capital-output ratio is not allowed to rise so long as real wages stay the same, which he thought that competitive condition will ensure.

How does the Indian experience corroborate the central insights which Lewis deduced from what has been called a classical growth process? Not very well beyond a point as far as I can judge. India has become a relatively high saving economy without getting perceptibly closer to what may be called the turning point when marginal returns to labour tend to get equal across the sectors. It is also clear that the terms of trade movement against industry can express only a part of the story, the part that pertained to the period between mid-sixties and mid-seventies.

In fact, it remains a puzzle that higher savings do not seem to have resulted in higher rates of growth. While arithmetic and casual observation may partially support the fact that capital-output ratio has risen on the margin, it is not clear to me what are the factors which have contributed to this process on an economy-wide basis. Above all, we have to remember that viewing the growth rate as a product of the marginal capital output ratio and the savings ratio is at best an equilibrium relationship and often little more than an accounting framework. In either case, it does not tell a causal story. We have to probe deeper.

(5) Is it possible to say that the rise in capital-output ratio has something to do with the operation of demand factors in our development process? Normally, this would be answered in the negative. Common wisdom has been that this is a sign of the increased inefficiency of resource utilization. But this is in my opinion only a part of the story and for some sectors, may be a large part of the story. But these are some economy-wide processes which cannot be ignored and they are at least in part connected with demand factors. While statistical exercises bearing on this point have yet to be fully carried out, we have factual evidence on the following points: (a) deceleration in the rate of growth of public investment from the mid-sixties onwards implied that capacity could not be fully utilised in certain capital goods sectors, e.g., the fact that steel investment could not be stepped up sufficiently meant in turn that heavy engineering sectors could not utilize their capacity fully. Increased investment in fertilizers, chemicals, etc., which came up on a relatively larger scale in the seventies generated more demand abroad than at home. On the whole, the cut back in public investment in the sixties and subsequent shift in the investment pattern implied that in sectors where we had built capacity ahead of demand, because of scale considerations, we did not derive the benefits we expected; (b) shift in emphasis away from a public irrigation based strategy of development in agriculture to the strategy of the 'Green Revolution' along with support price operation have led to income distributional changes which are not yet fully understood. While I believe

that by now the earlier 'immiserization' thesis put forward in the early seventies cannot be maintained in the areas affected by the 'Green Revolution,' not many would like to endorse the conclusion recently reached by Blyn that it has 'reduced income inequality'. However, it will possibly be agreed to by most that while the immiserization theory would appear not proven and in some specific areas there is evidence to the contrary, what has probably happened is that incremental incomes have accrued to the upper deciles to a larger extent because of the initially skewed distribution of asset-holdings. In its turn this has implied that incremental demands have been directed towards non-traditional consumer goods and also towards greater savings. Recent NCAER survey data showing a higher marginal propensity to save the rural sector in comparison with urban wage earners would constitute an indirect evidence for the second half of the proposition. While urban sector production has become more capital-intensive, suggesting much slower labour absorption rates, combined with the impact of the 'Green Revolution', this has not made it possible for us to benefit from the adoption of mass production methods in the case of items such as consumer durables which have shown higher rates of growth than necessities.

I think that the effect on the capital-output ratio has been more unfavourable than it needed to be, as the increase in production has been largely fragmented because of the operation of our industrial policy. Whether it was necessary for India to go in for the production of these goods is a moot question, but there is no justification for inefficient production of these commodities; (c) the cost of energy related investment has gone up very substantially, at a time when the direct and indirect energy requirements of Indian agriculture have gone up substantially especially in the areas affected by the 'Green Revolution', which constrain additionally the demand stimulating potential of investment through vertical and horizontal linkages.

Home demand is, however, not the only source of demand. There is also the necessity to take into account the role of exports. Indian export performance has been much criticised and one major deficiency of India's development strategy has been found to lie in its adverse discriminating treatment towards exports. Some would maintain that by maintaining an overvalued real exchange rate, India has not been able to derive the benefits of income and employment growth from trade. Once again, if true this will have an effect on the marginal capital-output ratio. The experience of newly industrializing countries of East Asia operating in densely populated areas has been found to be worthy of emulation by many economists. While I do not under-estimate the need for stepping up our export performance and also do not deny that our import substitution in some sectors has been excessively costly, I fear that at this stage India is unlikely to emerge as a leading actor on the export front. I have three main reasons for this conclusion. First, the relative size of the non-tradeable sectors is a vastly bigger one in the Indian case, which is posing major problems of management even for meeting home demand where one can naturally be more relaxed. Secondly, there is a limit to which efficiency wages can be reduced so as to generate adequate export competitiveness. Thirdly, the technological changes currently taking place in the world economy have introduced considerable uncertainty regarding the newly emerging international division of labour. For example, we have as yet no clear indication of how the large-scale application of microprocessors will change relative comparative advantages amongst the countries in regard to traditionally labour intensive manufacturers. Furthermore while the elasticity of world trade with respect to world product was well above unity during the fifties and sixties, it is not clear whether this episode will again be repeated at least within the next half-decade or more. This will mean that countries which are heavily trade-dependent will put up strong competition, which India will need to match. The scenario is somewhat reminiscent of what Keynes wrote in his famous essay in Yale Review in 1935, on 'National Self-Sufficiency'.

While the first point will possibly not be disputed, even though it can be maintained that we should be able to do much better than we have done in the past, the second point may be disputed. In a recent paper, G.S. Fields has studied the relationship between export-led growth and labour markets. His conclusion based on a comparative study of 7 countries in East and South-East Asia would appear to me to support my relatively pessimistic forecast unless we succeed in lowering the wage rates prevailing in industrial sectors to 'market clearing' levels. While I do not know what is meant by the market clearing level in a situation marked by profound dualism, it is unlikely to equal the current wage rate in the Indian organised sector. Most probably, it will be less and sometime much less. As such wage reduction is not possible, this will constitute an additional reason for my conclusion. Economists have under these circumstances argued for the adoption of dual exchange rates. But this has generally met with considerable resistance from those who believe that only a unified exchange rate is administratively feasible. The upshot is that the present world conjuncture is not especially encouraging for our exports, especially for manufacturing exports. Agricultural exports constitute a different type of problem. They may well have potential in the area of non staple exports which can be exploited given a suitable policy environment.

If my overall judgement on the export scene is broadly correct, then with our fast deteriorating land-man ratio, we have to look for a strategy of growth which places maximum emphasis on land-saving innovations. Unfortunately, as these innovations are also turning out to be more capital-intensive than envisaged before especially if ecological degradations are to be avoided, we are caught in a dilemma from which we cannot escape by demand stimulation alone through following a simple redistributive policy or from adopting a policy of cheap money for investment because of the inflation proneness that the economy has displayed over the last decade or so.

We need, in our situation, not merely an increase in 'thriftiness' on the part of our upper income groups, both rural and urban, which can be offset only by larger volumes of real public investment which will increase the productivity of labour in the wage goods sectors, and in capital goods sectors which are linked with them. The combined impact of these policies will be to generate a higher rate of growth along with a better distribution of incomes. Demand raising influences operating through higher real investment, especially public investment in sectors mentioned above along with growth of employment opportunities in agriculture and rural public works will help us in realizing the potential output that may be created through reduction in capital output ratio in existing sectors and also through augmenting the capacity in sectors which can be seen to constrain growth as of today. This implies much greater selectivity in project choice as well as a clear identification of key sectors from our present point of view.

The Indian economy entered the decade of the eighties in rather adverse circumstances. While some progress has been undoubtedly achieved in regard to import substitution in the oil sector, it is not clear despite this year's bumper crop, whether any trend improvement in the rate of growth of foodgrains vis-a-vis agriculture has been achieved. On the other hand, we have a difficult situation in regard to pulses and edible oils. Our export pick up, even when world recovery accelerates, if at all, is yet to be demonstrated. We also know that public investment may be further constrained by the declining inflow of net external capital inflow. Under the circumstances, the following components of a policy package would appear to me to be deserving of special attention: (a) rapid transformation of the rice economy especially in the Eastern region where adequate ground water potential exists which can without much difficulty be tapped during winter and summer seasons provided supporting infrastructural facilities are created, permitting conjunctive use with surface water; (b) a major coordinated effort at boosting oilseeds production, especially non-traditional varieties such as sunflower, etc.; (c) wholehearted attention to maintenance and repair of existing major irrigation works as well as power stations. These are some of the relatively low cost supply side strategies. But if these are accompanied by a suitable implementation of rural development programmes with an eye on the requirements of small and marginal farmers and agricultural labour, these can have a valuable impact on the demand for industrial products, both capital goods as well as industrial consumer goods and intermediates, helping to move them into more efficient zones. The industrial policy must be framed so as to bring down 'costs' by inducing firms to reap economies of scale, to reduce 'idle time' on machines and by bringing down capital cost through quicker implementation of projects.

I would not place any undue reliance on the import of technology as the solvent of all our problems. I recognize that our capital stock is outdated in certain sectors. But its replacement has to be necessarily a time phased affair with timing depending on our own specific needs and resource availabilities. It is necessary to stress that without a substantial step up in the domestic production of capital goods, technological absorption and adaptation problems cannot be successfully tackled. The fact that among the developing countries, India was among the first to develop the 'capital goods sector' should not be a handicap. Rather it is one of the few major achievements which we have to our credit. We need to modernise and modernise it fast, especially in certain sectors where adverses in materials science and/or advances in microprocessors have led to substantial reduction in costs. Several such sectors can be identified.

We need further to distinguish also between 'stable' and 'unstable technologies'. Where technology is stable and also vital to the performance of the key sectors in the Indian economy, we need to acquire it if we do not have it. Where technological development is very fast and our chance of getting 'locked in' with an inefficient technology are substantial, we have to be much more careful in devising our strategy of import. As a matter of fact, criteria for cost benefit analysis for technology acquisition are significantly different from ordinary commodity producing sectors. We need operational guidelines in this respect which are much less time consuming than the existing once.

According to some experts, the world is going through a third or possibly even a fourth 'Industrial Revolution' with information emerging as the key unifying concept. To profit fully from this newly emerging situation, it is very necessary that we give greater importance to building our scientific and managerial capability.

I believe that today material capital is losing out in relative terms with regard to human capital. Once upon a time, it was assumed that natural resources were the key to development. Coal and iron were supposed to be the sinews of economic growth.

I am not suggesting that they are not any longer important. But organization, motivation and creativity would appear to me to be just as important, if not more. While we have acquired considerable skill and expertise in running complex industrial processes our innovativeness as a nation is yet to be shown. This would appear to be one of the challenges of the eighties. The other major related area of concern for me is whether we can bring in new technology without increasing the extent of socio-economic dualism that prevails today. This to my mind poses one of the most serious problems involving our

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Sir John Addresses Convocation of University of Calcutta

Text of the convocation address delivered by Sir John Carew Eccles, FRS, at the University of Calcutta on March 28, 1984.

Convocation

"The subject of my convocation addrees will be the role of the University in our present Society. The easy answer is that the University trained all the technicians, scientists, doctors, teachers, lawyers, social scientists, that provide the essential services for modern countries. I fully agree with this essential role of the University which I could present you in much detail, particularly in the field of health care. However I think that a convocation address should be directed to a much wider and deeper survey that relates to the role of the University in the cultural history of mankind and leads from that to vision of the future that for good or ill is already germinating in our present.

"In this age it is fashionable to speak of evolution when considering our past and our imaginate future. But such talking lacks clarity and even substance if it is not realized that there are two quite distinct kinds of human evolution: biological evolution on the one hand and cultural evolution on the other. Biological evolution is often called Darwinism after its great exponnent, Charles Darwin. You will be familiar in general outline with the wonderful story of biological evolution from the first living cells some 3600 million years ago through to human evolution from a primate origin perhaps 10 million years ago. Eventually hominid evolution began its almost miraculous course about 3 million years ago through Homo Habilis, Homo Erectus, Homo Neanderthalis to Homo Sapiens Sapiens some 40,000 years ago with an incredible three-fold expansion of the brain from 450 g to 1400 g. According to classical evolutionary theory, this biological evolution was dependent on two distinct processes: Genetic mutation and Natural selection. The mutations producing animals (the phenotypes) most fitted for survival and reproduction were naturally selected. The hominids with the brain based efficiency of survival overcame hominids with less endowed brains. In the hazards of tribal organization and warfare the higher brain based intelligence led to the extermination of our ancestral lines the Australopithicines, Homo Habilis, Homo Erectus, Homo Neanderthalis—all represented now only by fossils: there can be no doubt that the brain supremacy of Homo Sapiens Sapiens is exhibited to our imagination as a ruthless struggle to the death.

"It will be realized that these gruesome encounters are over and that human biological evolution has Virtually been eliminated in the welfare state, where all humans should have equal opportunities to breed and to survive regardless of intelligence. In fact those of higher intelligence tend to have smaller families so the human race is probably in for a very gradual devolution. We may already have passed the summit of the human brain-based intelligence, and there is no acceptable way in which natural selection can be restored in a planned biological evolution so as to produce future superintelligent beings.

"With cultural evolution there are much more hopeful prospects. It has to be recognized that cultural evolution began very late in the biological story, as is indicated by artefacts such as stone axes. There have been successive stages over the last million years of hominid evolution from simple hand axes to the fine flaking techniques and finally to the superb blade technique of Homo Sapiens some tens of millenia ago. Already at 15 thousand years ago the cave paintings of Lassaux provide evidence of human creativity of a high order, which undoubtedly was linked with well developed descriptive language.

"Unfortunately we can have no knowledge of the origin of human languages because all was lost until writing was developed by the Sumerians about 5000 years ago. In the history of the great cultural epochs Sumer preceded Egypt and then there were the civilization of Babylonia, the Indus, and the Chinese. At a later stage came the Greek civilization that has given so much to our present culture. It is important to realize that creativity is responsible for all human culture. Animals have no culture. Moreover we inherit the culture of the past by virtue of it being inscribed on some enduring material base, as for example the paper and ink of books, the canvases and paints of the artist, the stone of the sculptures, the sound tracks of musical compositions.

"It is remarkable that prople with full sized brains may have very Primitive culture. However, the brains of their children are ready to accept a rich culture if they are given the opportunities as for example by adoption or in a less spectacular manner by an imaginitive teaching programme in schools. The development of each of us has been moulded by the culture in which we were immersed and which we assimilated according to the brain potentialities that we have inherited biologically. It is our culture that makes each of us a human person, derived as it is from parents, teachers, friends. Besides language, culture has many ways of speaking to us with literature, philosophy, plastic arts, music, mathematics, the sciences and technologies.

"So now I come to the role of the University in our Society. It is not just education for the professions, as is customerily thought. It is primarily to create wise and dedicated persons who will contribute to society; not only by their professional expertise, but also by their expertise as citizens. A most important function of the University is to contribute to the training of the next generation as teachers, who can function at all levels, particularly in the University. The University's first duty is to ensure its own survival into the future and at an even higher level. So it must be strongly committed to the training of teachers and research workers.

"It is important to realize that in cultural evolution each human person has to be created from zero, nothing is inherited, which is in great contrast to biological evolution where all is inherited including our brain with its diverse potentialities or propensities for cultural evolution in every field.

"The great responsibility of a Government is to ensure the opportunities for fulfilment in the lives of its citizens. The University is the most important Institution for this purpose. I repeat that the University will fail in its great mission if it restricts education to technical expertise in the professions.

"The very name University implies the universality of its responsibilities. It is important to remember that much of the educational process of a University is extra curricular. This should be encouraged as it was at Oxford in my day, the 1920's and 1930's. Given the inspired leadership of Universities and allied institutions, cultural evolution can prosper into the future even though there be no progressive biological evolution of the human brain capacity. The potentialities of our human brain are beyond all imagination as can be recognised in cultural history. We can anticipate great progress in culture for centuries and millenia. We may even be the primitives in the human cultural story." □

Aspects of India's Development Strategy for 1980s

(*Continued from page 7*)

social cohesiveness. International demonstration effects which have had very unfavourable effects on the growth pattern of some Latin American countries now recognised by the policy makers of those countries is beginning to gain in strength in India today. We should not succumb to it as if it represented an inexorable force of nature. Our cultural resources are relevant for designing our development pattern. This may sound an odd thing for an economist to say. But experience of the last one hundred years clearly demonstrates that technology is not merely a product of growing knowledge of the forces that govern nature, but also of our human concerns and human organization, where culture matters.

A society oriented towards the needs of the upper 10-15 per cent of its population can do very well, even with our proven resource endowment provided we know how to manage things somewhat better. But a society which has wider objectives in mind has to do very much more.

It must find along with new technology newer ways of involving people in the development process. This is a much more demanding job and requires for its success involvement of masses of people. While some of it may be organized through the market system, our job as planners is to find other organizational possibilities as well.

We need, in this context, to attach much greater importance to education, in the widest sense of the term. We also need to achieve newer modes of integrative behaviour without which tasks in the eighties which relate to poverty eradication cannot be successfully tackled.

Looking back, it seems to me that while our achievements during the last thirty odd years of planning have by no means been insignificant in the area of agricultural production, industrial diversification and technology acquisition, we have not been able to make a major impact on the lives of vast masses of our people. However, consciousness has very much increased. This can be a source of very positive developments, even when we are likely to face more difficult external circumstances. For this purpose, our planning needs to take into account the vastly changed circumstances compared with what prevailed when the first Planning Commission was constituted, of which Mr. G. L. Mehta was made a member. □

Lectures at Punjabi University

● Man's immense success in revolutionising science and technology, information and mass communication and mass transport during the last four hundred years, have created a crisis of "World Peace", remarked Dr Dharmendra Goel, Professor of Philosophy, Panjab University, Chandigarh. He was delivering a lecture on "Human Values" and World Peace at the Senate Hall of the University on April 28.

Dr Goel said scientific developments have brought distant and otherwise isolated countries near each other and the feeble human limbs have been endowed with the automatic push buttons releasing capacities to sow the whirlwind, but all this has not so far helped in removing the inequalities on the global scale.

The Professor of Philosophy pleaded for channelising the energies of the society to secure a permanent status among the comity of nations through modern techniques as, he added, it was difficult to go back to obsolete and archaic word masks of traditions.

Referring to the human values in the modern context Dr Goel said they have been three distinct types: those of the person, that of mind and lastly of the group or society; but, these values, he maintained, were not objects rather arrows into the unknown.

The man, Dr Goel said, has to jump beyond the great Frankenstein the machine, be it media, computer or the multi-billion multinational which underwrites the tastes of people and political opinion of the society.

Dr S.S. Johl, Vice-Chancellor, in his presidential remarks brought home the heavy amounts being spent on the manufactures of the modern armaments and the skills being exercised by some countries to sell them as soon as they become obsolete.

● Professor Abdul Majid Khan, an eminent educationist and a former Member of Punjab Public Service Commission, pleaded for universal brotherhood and love for humanity without any distinction of colour, caste, creed and religion. He was addressing the faculty members of the Punjabi University at the Senate Hall on the Message of Quran, on May 9.

Professor Khan said, the scholars from other religions should endeavour to speak and appreciate religions other than their own instead of venturing to highlight one pursued by them. This, he said, would provide an opportunity to study some other books which would reveal that fundamentals of all religions are the same except the difference of customs and rituals based on geographical limitations.

Prof Abdul Majid Khan, who escaped physical liquidation by violent mobs at Patiala during 1947 riots with the persuation of his friends and well-wishers, remarked that those who spread hatred among religions were disallusioned men.

Referring to the studies conducted by some scientists, Prof. Khan said that colour of blood of all human-beings was the same but some scientists to serve some vested interests were classifying in a different way to create a wedge between races.

All religions, Prof. Khan said, were equal according to Quran.

Referring to the age of earth, men and religions of the world, Prof Khan said three hundred crores years was the age of earth and man on earth was there since three lakh years but the religions have become known only since 6000 years.

Presiding over the function Dr. S S Johl, Vice-Chancellor remarked that all religions believe in universality of mankind, unity of God but black and white classification generated by the vested interests was prejudicial to the world peace.

14 new courses proposed at Delhi Varsity

From the Academic Session 1984-85 Delhi University proposes to introduce 14 new restructured undergraduate courses. The Academic Council of the University which met recently is reported to have accepted the proposals made by the University Grants Commission in the matter.

The courses would be offered in combination with subjects of BA (Pass) and BSc (General).

In BSc (Gen) Group A and Group B the coures offered are Computer Science, Electronics, Instrumentation, Analytical Methods in Chemistry & Bio-Chemistry, Industrial Chmistry, Agro-chemicals and Pest Control, Enviromental Science, Matho-Physics (Combined Physics and Mathematics).

In BA (Pass), the new courses offered would be : Industrial Relations and Personnel Management, Entrepreneurship in Small Scale Industries and Business Data Processing.

The other courses offered in B.A. (pass) and BSC (Gen) are; Family & Child Welfare, Food Technology, Nutrition and Health Education.

The colleges will be provided Rs. 1 lakh for running each course for one session by the UGC for a period of five years initially.

Marine science course in Bombay University

It it reported that the University of Bombay has accepted Marine Science as an application orientation subject for the BSc course. Colleges affiliated to the Bombay University can now seek permission from the university for introducing Marine Science at the graduate and postgraduate levels.

Awards under ISCA young scientists programme

Indian Science Congress Association introduced a programme of Awards for the benefit of young scientists from the 68th Session of the Science Congress in January, 1981. The programme enables young scientists to present their proposed research work with opportunities to exchange ideas in the relevant scientific problems with their counterparts and specialists.

Young scientists (below 30 years) and members of the Association are eligible for consideration for the Award.

The papers to be presented for consideration shall have to be under single authorship. Preference will be given for independent work preferably at the post-doctoral level, and the work must have been carried out in India.

One copy of the full paper alongwith three copies of its abstract in 100 words (to be clearly indicated on the top of the first page of the full paper and on the top of all the three copies of the abstracts the section where it is desired to be presented) shall have to reach the office of the General Secretary (Headquarters) not later than August 16 preceding the Session. Biodata, including full name and address alongwith the date of birth (duly supported by attested copy of the certificate), research experience, list of publications should be given in the top sheet of the complete paper.

The papers/abstracts will be scrutinised and the scientists will be required to present their papers in respective sections, if invited by the Sectional Presidents concerned.

Certificate of Merit and a Cash Award of Rs. 500/- will be handed over to the recipient with the citation. A further amount of Rs. 2,500/- towards incidentals, etc. will be sent to the awardees later from the headquarters of the Association. The total number of Awards is twenty.

Universities to study pollution in the Ganges

Pollution of the River Ganges from its source in the Himalayan region upto the Bay of Bengal is to be studied by a number of teams drawn from various Indian Universities. The programme of study, it is reported, has been finalised by the Department of Environment of the Government of India.

For the purpose of the study the river has been divided into three sectors: (i) Gangotri to Narora; (ii) Narora to Ballia; and (iii) Ballia to Hooghly.

The upper reaches are to be studied by the Universities of Garhwal, Roorkee and Gurukula Kangri. The middle stretch is to be examined by the Universities of Kanpur, Allahabad, Aligarh, Ranchi, Patna, Banaras Hindu University, C.S. Azad University of Agriculture and Rajendra Agricultural University. The Universities of Burdwan, Kalyani, Bidhan Chandra Krishi, Calcutta and Jadavpur will conduct research into the lower region.

The scope of the study will be to cover the origin and nature of pollution, impact of the pollutants on the Physicochemical conditions, productivity and ecology of the riverine system.

II Indian Journalism Congress

The Second Session of Indian Journalism Congress was held in the Department of Journalism and Mass Communication under the auspices of Indian Journalism Education Association recently. About 50 academicians and journalists from different parts of the country attended. The main theme of the Congress was 'After Namedia'.

The Congress was inaugurated by Sri K. Bhupal, Director of the Press Institute of India. Prof. A.K. Banerji, President, Indian Journalism Education Association & Head, Department of Journalism, Banaras Hindu University presided. Dr. Iqbal Narain, Vice-Chancellor, Banaras Hindu University was the chief guest.

The session on 'Language Journalism' was chaired by Mr. Justice S.K. Mukherjee, a former Member of the Second Press Commission. Sri Vidya Bhaskar, former Editor of 'Aj' of Varanasi was honoured for his outstanding contributions to Hindi journalism for four decades.

The session on Balanced Flow of News was presided over by Sri B.D. Vajpaye, Editor, Yugdharma, Jabalpur. The session on Impact of New Technology was chaired by Sri R. Raina, former Director of News Services, All India Radio and Director, Film Festival of India. The Training Session was chaired by Prof. P.N. Malhan, formerly Professor of Indian Institute of Mass Communication and Head, Department of Journalism, Osmania University. Several Journalism Awards were given on the occasion.

Prof. Anjan Kumar Banerji was re-elected as President of the Indian Journalism Education Association. Sri A. Rahim (Osmania) and Sri C. Mahapatra (Berhampur) were elected General Secretary and Jt. Secretary respectively.

The following recommendations were made at the Congress:

(1) The recommendations of

We Congratulate....

(1) Dr. N. Ganga Prasad Rao who has been appointed Vice-Chancellor of the Marathwada Krishi Vidyapeeth, Parbhani.

(2) Prof. K. J. Mahale, Vice-Chancellor, Manipur University, who has been awarded recently the Chevalier in Academic Pamls Order by the Govt. of France for his contribution to the spread of French language and culture in India.

(3) Dr. J.M. Choudhury, Vice-Chancellor, Gauhati University, who has been nominated by the Visitor of the North Eastern Hill University as a member of the Executive Council of the University for a term of 3 years. He has also been nominated by the Visitor of the Manipur University as a member of the Senate of the University for a term of 3 years.

the Second Press Commission particularly those relating to journalism education, (such as, the establishment of National Council of Journalism Education) should be implemented at an early date.

(2) The Press Council Act should be amended to include 'Training in Journalism' as one of the objectives, with the representation of the Indian Journalism Education Association on the Council.

(3) Effective training with specialisation in language Journalism not only for freshers but also for inservice personnel should be introduced in collaboration with professional bodies.

(4) The UGC Panel on Mass Commuuication should be strengthened with representation of more journalism teachers.

(5) The points developed at the Tashkent meeting of the IPDC Inter-Governmental Council should be followed by developing countries for improving their own news structures and exchanging of information with neighbouring countries and Namedia should be requested to work in this direction in collaboration with South Asian countries initially.

(6) Due protection should be given to the journalists for discharging their duties objectively for the socio-economic development of the country.

30 per cent colleges non-viable

The National Commission on Teachers for Higher Education headed by the Vice-Chairman of the University Grants Commission, Prof. Rais Ahmed, has found after a "stratified sample survey" that 30 per cent of the colleges in the country were "non-viable" because they did not have enough student strength. Some other findings of the survey are : (i) About 53 per cent of the teachers possessed PhDs at the university level and these increased with the professional level; (ii) 64 per cent of the teachers in colleges and universities did not have basic facilities like medical aid; (iii) Two-third of the universities and colleges did not have any provision for their staff for granting house building loans to their employees—teaching and non-teaching; (iv) The working and service conditions of the teachers in universities and colleges, as revealed after on-the-spot enquiries made in about 5 per cent of the country's rural and urban colleges was appalling; (v) 47 per cent of the teachers in the universities and colleges were working on ad hoc or temporary basis.

Research in invertebrate reproduction biology

Dr. R. Natarajan, Director of the Centre of Advanced Studies in Marine Biology, Porto Novo, of the Annamalai University disclosed while presiding over the 3-day All-India Symposium on Invertebrate Reproduction held at Tiruchi recently that the Department of Science & Technology has cleared a Rs. 40 lakh project for an All-India Coordinated Research in Invertebrate Reproduction Technology. This is of relevance to agriculture, sericulture and eco-culture.

CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/ Seminar/Symposium/ Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted	Remarks
June 4-17, 1984	Workshop on Composite Structural Technology.	Continuing Education Programme	Department of Aeronautical Engg., Anna University, Madras.	Dr. N.S. Venkataraman, Prof. & Head.	—
June 11-24, 1984	Summer Institute on Modern Concepts in Crystal Growth.	To impart training to College and University teachers.	Crystal Growth Centre, Anna University, Madras	Prof. P. Ramasamy	—
June 18-July 10, 1984	UGC sponsored seminar-cum-workshop on the Teaching of Professional English at College/ University level.	—	Dayalbagh Educational Institute, Agra.	Dr. Darshan Dayal Head, Department of English.	—
July 5-10, 1984	Conference on Experimental Analysis of Structures	Continuing Education Programme	Department of Aeronautical Engg., Anna University, Madras.	Dr. N.S. Venkataraman, Prof. & Head	—
July, 1984]	Familiarisation Workshop on Remote Sensing Applications for Earth Sciences.	To train the officers of State Govt.	Institute of Remote Sensing, Anna University, Madras.	Prof. R. Palanivelu	—

The research will be taken up by the Centre of Advanced Studies in Marine Biology, Porto Novo, and the Department of Zoology in the Universities of Madras, Andhra, Bangalore, and Marathwada.

Dr. Natarajan also mentioned that the contribution of invertebrates—prawns and crabs—to human life was vast and vital and that research would have to be taken up on an intensive and extensive scale.

UGC test for JRF

The University Grants Commission will hold a national level test on August 26, 1984 for the award of Junior Research Fellowships available under the general scheme or various quality programmes such as Departments of Special Assistance, Major Research Projects etc.

The value of the fellowship per month is likely to be revised from Rs. 600/- p.m. to Rs. 1000/- p.m. The test will be conducted in Physics, Chemistry, Mathamatics, Life Science, Geology, Geography, Economics, Political Science, Philosophy, Psychology, Sociology and History.

The venue for the test will be 66 universities which have agreed to hold the test. The candidates can take the test at any centre. The last date for registration is June 25, 1984.

Entrance examination for BE and MBBS courses in Karnataka

A decision has been taken by the State Government of Karnataka to hold a joint entrance examination on July 8 and 9, 1984 for admission to the merit pool in the medical and engineering colleges in the State. The ranking in the entrance examination would be the criterion for admission to this pool in all the government, university, regional, aided and private engineering, medical and dental colleges.

However, for the seats to be filled up by the management in the private colleges, reciprocal seats, seats filled by Govt. of India nominees and those reserved for candidates residing outside Karnataka, the entrance examination would not be applicable.

A committee under the chairmanship of Dr. D. Shankar Narayan, Vice-Chancellor, Bangalore University, has been constituted to conduct the entrance examination. The Director of Technical Education would be its Member Secretary.

Bihar appoints panel to study staffing pattern of Varsities

The Education Minister of Bihar has recently set up a committee to study the staffing pattern of universities, it is reported. The committee consists of one representative each from the Inter-University Board, the Education Department, the Finance Department and the university concerned.

The committee would examine the requirements of non-teaching staff of all the universities. Such an exercise has become necessary in view of the increasing development activities in the universities, it is stated.

Noise control in India

A meeting under the auspices of the Acoustical Society of India, Delhi Chapter, was held on May 5, 1984 at IIT Delhi to discuss the problems of Road Vehicle Noise. The discussion was initiated by Prof. H. B. Mathur of IIT Delhi. Some of the points that emerged from the discussion on engine noise were:

- The Noise data generally available by and large is based on foreign sources and relates to foreign equipment. To enable noise control measures to be applied to Indian equipment under Indian conditions, there is a strong need to generate noise data on Indian Equipment.
- For generating the above data, various research funding agencies should sponsor suitable projects.
- Incentives should be provided to enable Engineering Colleges, IIT's, Research Institutes and universities to collect Noise data about various Indian equipments.
- The Dept. of Environment of the Govt. of India should initiate and co-ordinate the collection of the above data. The Dept. of Environment should also be approached to initiate action to indigeneously develop and manufacture an inexpensive sound Level Meter without which any extensive noise control work is not feasible.

Seminar on post-war Manipuri drama

The Department of Manipur Language & Literature organised a seminar on Post War Manipuri Drama on April 19, 1984. Five Students read papers on social plays, on historical plays, on dramatic literature, on dramatic production and on social and political plays. Reading of each paper was followed by a detailed discussion with questions from the participants.

Dr. E. Dinamani Singh, Assitant Professor of Manipuri Department praised the students of their keen perception of the subjects.

Shri Ch. Manihar Singh, Head of Department presided over the proceedings and gave assessment of the works of the contributors.

Distributed Information Centre in Anna University

The Government of India, Department of Environment, have approved the setting up of a Distributed Information Centre (DIC) in Anna University in the Subject-areas of Eco-Toxicology, Bio-degradation of wastes and environmental impact assessment under the plan activity on Environmental Information System (ENVIS). An amount of Rs. 3.74 lakhs has been allotted for the period upto 31st March 1985 towards recurring and non-recurring expenditure in this regard.

News from Agril. Varsities

Veterinarians pledge to serve the society

Dr. R.S. Grewal, Director of Animal Husbandry, Punjab said that animals were the best companions of mankind and providing health cover to ailing animals was the 'Noblest of the noble' profession. Dr Grewal further said that one could learn a lesson of faithfulness from the animals like a dog, a horse or a cow who, though could not speak felt grateful to their masters when properly looked after.

Dr Grewal was addressing the 103 outgoing veterinary graduates of the College of Veterinary Science of the Punjab Agricultural University recently.

Dr B. S. Paul, Dean of the College, administered the veterinarian's oath in which the graduates solemnly pledged to use their scientific knowledge and skill for the benefit of the society through protection of animal health in keeping with the principles of veterinary medical ethics.

Dr Sukhdev Singh, Vice-Chancellor of the PAU who presided over the function, advised the outgoing veterinarians to serve the cause of animal health with devotion as white revolution mainly depended on the health of high-producing buffaloes and hybrid cows. The Vice-Chancellor further said that education did not end with the obtaining of a certain degree but it was a continuous process in life. The veterians should always get their knowledge updated by consulting the latest literature on their profession as 'the man who reads is the man who leads'.

HAU to fabricate solar heaters

The Department of Agricultural Engineering of Haryana Agricultural University (HAU) will fabricate and sell solar water heaters to the campus employees.

According to Mr. L. D. Kataria, Vice-Chancellor, initially a few pieces on experimental basis would be sold to the employees of the university on no-profit-no-loss basis with the objective of popularising the solar heaters for saving conventional sources of energy. The maximum temperature recorded during winter, on sunny days, is 50 to 60°C. Prices of these solar heaters has been fixed at Rs. 500 and 600 for heaters with a capacity of 60 litres and 90 litres respectively.

Pollutants and animals

Kerala Agricultural University has initiated a research project to investigate the hazards of environmental pollutants on animal health and production in the State.

This project, with an estimated cost of Rs 2.74 lakhs and funded by the Indian Council of Agricultural Research will be implemented by the department of pharmacology and toxicology at the College of Veterinary and Animal Sciences, Mannuthy.

The study will be conducted in the major industrial belts covering Eloor, Ambalamedu, Trivandrum, Punaloor and Mavoor and the agricultural belts like Kuttanad. Water samples from rivers, wells and ponds of the polluted areas and samples of cattle feed and fodder will be analysed for their residual toxicity.

The study will assess the amount of toxic elements reaching the animal body fluids and its impact on their health.

It will also look into the accepted daily intake and permissible levels of various toxicants and remedial and curative measures for effluent toxicity in animals.

News from Abroad

Australian National University's breakthrough in research on Leukaemia

Two research teams from the John Curtin School of Medical Research at the Australian National University, Canberra, have successfully cloned the gene vital for the reproduction of blood cells. The cloning of the gene, called interleukin-3, also marks the beginning of a new era in research on the factors which regulate formation of the different blood cells from stem cells in bone marrow. This important development in genetic engineering gives new hope for the understanding and treatment of leukaemia.

The researchers, led by Dr. Andrew Hapel, an immunobiologist, and Dr. Ian Young, a molecular biologist, have isolated the gene in mouse cells, and are optimistic that they can now isolate the corresponding gene in humans.

If they are successful, and they hope to have the answer in the next few months, it could have profound implications in medicine, particularly in the understanding and treatment of leukaemia.

In the short term the isolation of human interleukin-3 would be valuable in speeding up the recovery of patients with bone marrow transplants. Dr. Hapel said transplant patients now were left for a long period without adequate white blood cells to ward off infection. It might be possible that some people suffering from leukaemia could have their own healthy bone marrow cells grown in the laboratory and injected back to replace diseased marrow.

Professor William Doe, professor of medicine and clinical science at the John Curtin School, said that in the longer term the discovery offered for the first time a "handle on the mechanism" by which white blood cells proliferate.

The researchers say that the urgent need now is to develop the interleukin-3 discovery to the point where the potential of human interleukin-3 can be realised in clinical medicine, including trials with leukaemia and bone marrow transplant patients.

Professor Doe said the school planned to market commercially both the mouse genes and later the human genes. Discussions had already begun with the Sydney-based company, Biotechnology Australia, to meet the world-wide interest in the products.

Sports News

GNDU wins Dr. B.L. Gupta inter-university general championship trophy

Guru Nanak Dev University has won the Dr. B.L. Gupta Inter-University General Championship Trophy for the year 1983-84 securing 344 points. Calicut University stood II with 198 points and Kerala University stood III with 184 points. For the year 1982-83 this Trophy was won by the Kerala University. The position of the Universities upto 10th place is: Guru Nanak Dev University—I; Calicut University—II; Kerala University—III; Punjabi University—IV; Poona University—V; Delhi University—VI; Madras University—VII; Bombay University — VIII; Kurukshetra University—IX; Panjab University—X.

Have identity card—will travel

An Olympic identity card issued by the respective National Olympic Committee will be an essential entry document into the United States during the forthcoming Olympic Games at Los Angeles.

According to the US State Department, athletes from all countries will be given "unhindered entry" to the United States if they are properly accredited by their respective National Olympic Committee.

In addition to that, each Olympic Committee has been asked to submit lists of names to the US Embassy to ensure the smooth and efficient entry of such persons when they arrive in the United States.

1987 Universiade at Zagreb

Zagreb in Yugoslavia will host 14th World University Games in 1987. This decision was taken by the Executive Committee of the International Universities Sports Federation at a meeting held in Venice recently. Zagreb got the vote over two other contenders to hold the games – New Delhi and Brisbane.

Breakthrough for women's sport

Los Angeles will see a major breakthrough for women's sport when the first ever Olympic Marathon for the fair sex takes place on August 5. Following the tremendous response to the event in the IAAF World Championships at Helsinki last year when the Norwegian physical educationist-cum-housewife Grete Waitz won comfortably in 2:28:09 a time which not so long ago, would have been winning performance in the male section.

Preparation of teams for the next world university games

As a part of the preparations for participation in the next World University Games to be held at Kobe (Japan) from 24th August to 4th September, 1985, the AIU is organising coaching camps in the games of Athletics (M&W), Volleyball and Football at National Institute of Sports, Patiala from 10th June to 9th July, 1984. 25 trainees each in the games of Football and Volleyball and 40 Athletes (M&W) will be undergoing a month long vigorous training.

AIU News

The Association of Indian Universities has deputed Prof. V. Natarajan, Project Director (Exams) to attend the Tenth Annual Conference of the International Association for Educational Assessment at Perth, Australia from 11th to 15th June, 1984. The main theme of the conference is 'Assessment of Developed Abilities.' Prof. Natarajan will present a paper on 'A Method of Equating Marks from Different Boards' and chair the Session on School-Based Examination.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

HUMANITIES

Philosophy

1. Chingamani, M.A. *Relations in nyaya-vaisesika, sankhya, visistadvaita and dvaita systems.* U Madras.
2. Hikosaka, Shu. *Buddhism from Tamil sources with special reference to Manimekalai and Chilapathikaram.* U Madras.
3. Koilpillai, J. Thomas Daniel. *The relation between religion and morality with special reference to A.C. Hogg and Reinhold Neibuhr.* U Madras.
4. Vayyapuri, R. *Philosophy of Santhalinga Swamigal.* U Madras.

Music

1. Bharathi, Vedavalli Mandayam. *Mysore as a seat of music during 19th and 20th centuries.* U Madras.
2. Seetharamalakshmi, T. *A study of the compositions of Purandaradasa and Tyagaraja.* Bangalore U.

Language & Literature

English

1. Azmathullah, S.M. *Comparative study of Wordsworth and Nazir Akbarabadi—two nature poets.* U Madras.
2. Bharucha, Ferheiz C. *A study of the characters of Indian women in the novels of Colonel Philip, Meadows Taylor, Flora Annie Steel and Rudyard Kipling.* SNDT, Bombay.
3. Chougule, Sadu Aba. *The theme of loneliness in modern American poetry 1890-1950 with particular reference to the poetry of Robinson, Frost and Eliot.* Shivaji U, Kolhapur.
4. Harriet Prim. *The Human encounter in the fiction of Katherine Anne Porter.* HPU, Simla
5. Joseph, A. *Analysis and teaching of the rhetorical features of written compositions.* U Madras.
6. Joseph, Mathew. *The poetry of E.A. Robinson : A study in symbolism.* U Ker, Trivandrum.
7. Krishnamachari T. *Saranagati and english poetry with special reference to G.M. Hopkins.* U Madras.
8. Newsam, Primula. *Bibical images in T.S. Elliot's poetry.* U Madras.
9. Seetha, S.V. *From alienation to community: An analysis of the poetry of Nissim Ezekiel, A.K. Ramanujan and R. Parthasarathy.* U Madras.

German

1. Meenakshi Reddy. *Zur Behandlung der expressionistischen lyrik in der Ausbildung indischer Germanistikstudenten, Eine literaturdidakische studie.* CIEFL, Hyderabad.

Sanskrit

1. Matha, S.R. *A critical study of the Kausitaki Brahmana Upanisad with its available commentaries.* SVU, Tirupati.
2. Mishra, Kamala Kant. *Arth vigyan ko shabd shastra evam kavya shastra ka yogdan. D. Litt.* KS Darbhanga.
3. Mythili, S. *Yatraprabandha of Samarapungava Diksita: A critical study and edition.* U Madras.
4. Panda, Bala Datt. *Kalidas ke sahitya mein shishtachar.* Kum U, Nainital.
5. Rukmani Rani. *Rupa Kaviraj Krit Gaudiya Vaisnvasar Sangraha.* U Delhi.
6. Sharma, Des Raj. *Balmiki ke kriyarup : Ek bhashik adhyayan.* HPU, Simla.
7. Sharma, Kedar Nath. *Sanskrit kavyashastriya granthon mein upalabdh Rasabhasadi ke udahranon ka sameekshatmak adhyayan.* U Jammu.
8. Tripathi, G.D. *Pramukh samritiyon ka samajik adhyayan.* Kum U, Nainital.
9. Vyas, Shiv Kumar. *Devyagan Shastra ke kshetra mein Dalhan ka yogdan.* KS Darbhanga.

Hindi

1. Banerjee, Pratima. *Ram Chandra Verma aur unke sahitya ka mulyankan.* Devi Ahilya, Indore.
2. Bhatt, Deepa. *Hindi pradesh ke pramukh lok sahitya kee sapeksita mein Kumauni lok sahitya mein nari.* Kum U, Nainital.

3. Gupta, Uma, *Hindi vyakaran ke rup tattwon ka itihasik dhyayan*, 900 AD.-1500 *A.C.* U Calcutta.

4. Joti Pershad. *Swatantrayottar Hindi upanyason mein ntayaj patra.* U Delhi.

5. Khadke, Prakash Gangadhar. *Modern hindi Khandavya.* Shivaji U, Kolhapur.

6. Mishra, Rajendra. *Angreji hindi nai kavita kee pravritivon ka samantar adhyayan.* D. Litt. Dev. Ahilya, Indore.

7. Mohanan, R. *A study of the elements of alienation in he works of Mohan Rakesh.* U Cochin.

8. Pathak, Ram Bandan. *Hindi ke anchlik upanyason mein dhunikta.* Mag U, Bodh Gaya.

9. Rajendra Kumar. *Upanyaskar Bhagvati Charan Verma.* U Raj, Jaipur.

10. Sharma, Shashi Prabha. *Acharya Chatursen Shastri ke upanyason ka sanskritik adhyayan.* Jiwaji U, Gwalior.

11. Sharma, Suresh Kumar. *Sathottary hindi kavita.* JNU, Delhi.

12. Shukla, Abha. *Hindi ke anchlik upanyason mein yugchetna ke vividh rupon ka anusheelan.* RSU, Raipur.

13. Singh, Nagendra Pratap. *Prem Chand and Yatharthavad.* JNU, Delhi.

14. Vyas, Satyanarayan Kalyanrai. *Dr. Hazari Prasad Dwivedi.* SPU, Vallabh Vidyanagar.

Urdu

1. Mohinder Lal. *Critical editing of Dastan-e-Haft Sayyan.* U Jammu.

2. Pasha, Syed Waheed *Educational ideals in selected Urdu novels.* SVU, Tirupati.

3. Peerzade, Raziyasultana Sahebhussian. *Urdu novel in its social background : A critical survey.* Shivaji U, Kolhapur.

Bengali

1. Bhattacharyya, Subodh Ranjan. *A critical analysis of bhakti sandarbha.* Gauhati U.

2. Majumdar, Akhil. *Jana Chetanar dui kabi : Sukanta Bhattacharyya-O-Subhas Mukhopadhyay.* U Calcutta.

3. Mukhopadhyay, Arun Kumar. *Kaler Puttalika: Ninety years of bengali short stories* 1891-1980. U Calcutta.

Assamese

1. Das, Kameswar. *Imagery: Its application in assamese poetry* 1900-1940. Gauhati U.

2. Deka, Umesh. *Post-war assamese novel: A study of the assamese novel between* 1945 *and* 1960. Gauhati U.

Oriya

1. Mishra, Asha. *Madhya yugiya oriya chitau sahitya.* Utkal U, Bhubaneswar.

Marathi

1. Gadre, Anuradha. *Marathi dramatic criticism : A critical study,* 1865 *to* 1935 *A.D.* SNDT, Bombay.

2. Kulkarni, Anuradha Damodar. *The study of short anecdotal verse narrations phuta akhyan kavye in old marathi.* Shivaji U, Kolhapur.

3. Manohar, Yeshwant Rajaram. *Keshavsut Madrekar.* Nagpur U.

Persian

1. Arif, Md. Majahid. *Makhdoom Sharafuddin Yahya Maneri: Editing of his manuscript Sharah Adabul Muridin and its revaluation.* Mag U, Bodh Gaya.

Tamil

1. Kothandaraman, M. *Folk songs of North Arcot District.* U Madras.

2. Nilamane, M. Develop

epics. U Madras.

3. Ravichandran, S.M. *Treatment of nature in Civakacintamani.* U Madras.

4. Selvaraj, Mary Grace. *A study of the novels of Vatuvar K. Turaicami Iyyangar* 1880-1942. U Madras.

5. Selwan, T. *Narrinai: An advanced literary study.* SVU, Tirupati.

6. Subramanian, R. *Law and justice in tamil literature up to* 1200 *A.D. including inscriptions.* U Madras.

7. Thamizharasi, R. *Techniques of Sangam literature.* U Madras.

Kannada

1. Moldi, Shashikala. *D.V.G. sahithya hagu yugadharma.* Gulbarga U.

Telugu

1. Godavari Bai, S. *Erraya Harivamsamu-vimarsanatmaka pariseelanamu.* SKU, Anantapur.

2. Gopa Balam, Tatavarthi Raja. *Acharya Yaswee Saraswath Varivasya Prasanna Kusumayudha Mahakavya pratyeka sameeksha.* Andhra U, Waltair.

3. Jayaprakash, S. *Village names of Chingleput District : Five Northern Taluks.* U Madras.

4. Sastry, Tumuluru Sri Dakshina Murty. *Sreerama Kathamrutamy Sangra sameeksha.* Andhra U, Waltair.

5. Satyanarayana, Sobhirala. *Srimadandhramahabharata silpakaladarsanam.* Andhra U, Waltair.

6. Subba Rao, Parvataneni. *Siriparagada dharmaya Nalacharitramu vimarsanatmaka pariseelana.* Andhra U, Waltair.

7. Vijayalakshmi, R. *Influence of Buddhism on modern telugu poetry.* U Madras.

Geography

1. Deshmukh, Shaharirao Balasaheb. *Gur and sugar industry in Kolhapur District : A geographical analysis.* Shivaji U, Kolhapur.

2. Gatade, Dattatraya Ganpati. *Industrial geography of the Konkan excluding Bombay City.* Shivaji U, Kolhapur.

3. Raminder Kaur. *Changes in population characteristics of Western Malwa Tract, Panjab,* 1951-71: *A spatial analysis.* Pb U, Chandigarh.

4. Sinharay, Gauri. *Midnapore: A study in population geography.* U Calcutta.

History

1. Indhrani, K. *Forest policy and administration of the Madras Presidency under the Crown,* 1858-1935. U Madras.

2. Jagadeesan, P. *Institution of marriage and social legislations in Tamil Nadu,* 1850-1947. U Madras.

3. Manoharan, G.W. Cornelius *Prescription in the Madras Presidency,* 1900-1947. U Madras.

4. Nilopa, Duang Porn. *Economic history of Indo-China from 2nd century B.C. to 15th Century* A.D. Mag U, Bodh Gaya.

5. Paphavong, Bounmy. *A history of Laos from the fourteenth century A.D. to A.D.* 1707. U Delhi.

6. Ramasamy, R. *The Saptarsisvara Temple at Lalgudi: A study.* U Madras.

7. Seshan, K.S.S. *British relations with Punganur zamindari,* 1799-1948: *A study in indirect rules.* SVU, Tirupati.

8. Singh, Rabindra Narain. *Survey of early Indian administration: Vedic age to A.D.* 650. Mag U Bodh Gaya.

9. Sinha, Indra Kumar. *Vatapi ke Chalukya-Ek sanskritik adhyayan.* Mag U, Bodh Gaya.

10. Srichuay, Puranit. *A critical survey of Indian culture in Indonesia.* Mag U, Bodh Gaya.

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ENDRIYA HINDI SHIKSHAN MANDAL, AGRA

Advertisement No. 2/84-85

Applications are invited at the Kenriya Hindi Sansthan for the temporary post of (1) Professors (Two) One in Hindi Language & Literature nd one in Applied Linguistics) (2) Readers (Two) (Applied Linguistics) (3) Research Asstts. Evaluators (Three) (Applied Linguistics); RESERVATIONS : Professor (one in Applied Linguistics reserved for SC/ST); Readers (one each reserved or SC & ST); Research Asstt/Evaluaors (Two posts one each for SC & ST); **PAY SCALE**: Professor: (1500-50 1800 100 2000 125/2-2500); Reader (1200-50-1300-60-1900); Research Asstt./Evaluator (550-25-750-EB-30-900) plus all allowances admissible to Central Govt. employees. **AGE RESTRICTIONS** : Professors: not below 35 years. Readers: below 30 years, Research Asstt/Evaluatiors : not above 35 years as on **1-6-1984**. Age limit relaxable.

QUALIFICATIONS: Essential (A) Post (1) (a) Consistently good academic record with 1st or high 2nd class (B+) Master's degree in Hindi or Linguistics. (b) Hindi atleast upto Bachelor's level for those having Master's degree in Linguistics. **POST** (2) Consistently good academic record with 1st or high 2nd class (B+) Master's degree in Linguistics with Hindi at least upto Bachelor's level and/or Master's degree in Hindi with a degree or diploma in Linguistics/Applied Linguistics. **POST** (3) Consistently good academic record with 1st or high 2nd class (B+) Master's degree in Hindi/Linguistics Applited Linguistics. **ESSENTIAL** (B) **POST** (1 & 2) A Doctor's degree in the concerned discipline and/or published work of equally high standard. **POST** (3) Training in Linguistics/Applied Linguistics for M.A. in Hindi and Hindi upto Bachlor's level for those having Master's degree in Linguistics/Applied Linguistics. **ESSENTIAL (C) : POST** (1) At least ten years experience of teaching and/or research at a University or an Advanced Institute in the field of Hindi literary analysis/language teaching/language analysis (Western or Indian) including at least three years experience of Readership or an equivalent post. **POST** (2) : At least seven years experience of teaching and/or research at a University or an advanced Institute in the field of language teaching/Applied Linguistics including at least five years experience of lectureship or an equivalent post.

DESIRABLE : (A) POSTS (1 & 2) Knowledge of modern Indian language(s) other than the mother tongue and Hindi. **POST** (3) Experience of teaching or research in Hindi teacher's training and/or production of teaching instructional materials for teaching Hindi as a second/foreign language.

DESIRABLE (B) POST (1) Experience of producing teaching materials organising research and training programme for teaching of Hindi. **POST** (2) Experience of producing teaching materials, organising research and extension programmes and training teachers in the field of teaching of Hindi as a second/foreign language. **POST** (3) Specialisation in language evaluation and testing / preparation of audio-visual materials/sociolinguistics-mass-media techniques. **DESIRABLE** (C) POST (2) Experience of teaching through mass media or correspondence. **DESIRABLE (D) POST (2)** Experience of research and field studies in language teaching/language analysis, sociolinguistics/Hindi linguistics.

For application forms and other particulars write to Director, Kendriya Hindi Sansthan, Hindi Sansthan Marg, Agra-282005 with 90 paise stamped self addressed envelope (23 x 10 cm) post serial no. and name of the post or obtain from counter during working days (10.30 a.m. to 5.00 p.m.). Separate application should be sent for each post. Selected candidates can be posted at Gauhati/Hyderabad/Delhi/Agra or at any other campus/centre established in future. Closing date for receipt of extension in Agra office: **18-6-84**. For applications from abroad extension of 15 days for closing date.

KARNATAK UNIVERSITY, DHARWAD

No. KU BOA/ADVT/84/68

Date : 14-5-1984.

Advertisement Notification

Applications (seven sets) in the prescribed forms are invited for the below mentioned posts in the Post-graduate Departments at Dharwad, Belgaum & Karwar and Constituent Colleges of the Karnatak University, Dharwad.

Application forms can be had from the Director, Prasaranga, K.U. Dharwad, on payment of Rs. 4/- per form (Rs. 28/- per set) which should be credited to State Bank of India, Karnatak University, Dharwad, and the challan towards the payment of the same should be presented.

Candidates desirous of obtaining the forms by post, should send a self addressed 28 x 12 cms. cover affixing Rs. 2/- postal stamp along with the crossed demand draft for Rs. 28/- made payable to the Finance Officer, Karnatak University, Dharwad.

Sl. No.	Name of the Subject & Post.	No. of Posts	Reservation
1	2	3	4
	Post-graduate Departments, Dharwad		
(I)	**PROFESSORS**		
1.	Kannada (Veerasaiva Literature)	One	BCT
2.	Jainology	One	BT
3.	Sanskrit	One	GM
4.	Librarian (K.U. Library)	One	SC
(II)	**READERS**		
1.	English	One	SC
2.	Economics	One	SC
3.	Philosophy	One	SC
4.	Commerce (Cost A/c)	One	SC
5.	Law	One	BT
6.	Kannada (Brahminical Lit)	One	BSG
7.	Social Work (Community Welfare)	One	BCM
(III)	**LECTURERS**		
1.	Sociology	One	BCT
2.	Psychology	One	SC
3.	Gandhian Studies	One	SC
4.	Journalism & M. Commn.	One	GM

1	2	3	4
5.	Statistics	One	BSG
6.	Biochemistry	One	BCT
7.	Botany	One	SC
8.	Commerce	One	GM
**9.	Administration (BM)	One	BCM
10.	Mathematics	One	GM
11.	Zoology	One	BSG
12.	Sanskrit	One	BCM
13.	Marine Biology (PG Karwar)	One	GM
14.	Hist. & Archaeology	One	SC
15.	Law	One	BSG
16.	In-Organic Chemistry	One	GM
17.	Hist. & Archaeology	One	BCM
18.	Education	One	BSG
19.	Sanskrit Shastri	One	SC
	For P.G. Belgaum Campus, Belgaum		
I.	**READERS**		
1.	Economics.	One	GM
2.	Commerce	One	GM
*3.	Sociology	One	GM
*4.	Geography	One	BSG
*5.	Kannada	One	SC
*6.	Mathematics	One	BCT
II.	**LECTURERS**		
1.	Economics	Three	(1) BSG (2) BT (3) GM
2.	Commerce	Three	(1) GM (2) SC (3) BCM
*3.	Sociology	Three	(1) GM (2) BCM (3) SC
*4.	Geography	Two	(1) BCM (2) GM
*5.	Mathematics	Three	(1) GM (2) ST (3) BCT
	At Constituent Colleges		
	LECTURERS		
1.	Criminology & F. Science	Two	(1) SC (2) ST
2.	Education	One	BCM
3.	Law	Two	(1) SC (2) BSG
4.	Philosophy	One	SC
5.	Statistics	One	BT
6.	Physics	One	BCM
7.	Statistics	One	SC

Scales of Pay in the P. G. Departments

1. Professor & Librarian : Rs. 1500-60-1800-100-2000-125/2-2500.

2. Reader : Rs. 1200-50-1300-60-1900.

3. Lecturer : Rs. 700-40-1100-50-1600.

4. Scale of Pay for the post of Sanskrit Shastri : Rs. 920-30-950-50-1200-60-1500-75-1725.

(With usual allowances admissible as per University rules from time to time).

Scales of Pay in the Constituent Colleges.

1. Lecturer : Rs. 1050-50-1200-60-1500-75-1950.

(With usual allowances admissible as per University rules from time to time).

QUALIFICATIONS FOR THE POSTS OF UNIVERSITY LECTURERS/READERS/PROFESSORS/LIBRARIAN AND LECTURERS IN CONSTITUENT COLLEGES IN ARTS, SOCIAL SCIENCES, SCIENCE, EDUCATION, LAW, COMMERCE & BUSINESS MANAGEMENT.

GENERAL

Knowledge of Kannada is desirable

University Lecturers

(a) A Doctorate's degree or research work of an equally high standard; and

(b) Good academic record with atleast second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing inter-disciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of candidate as evident either either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's Degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increment until he fulfils these requirements.

University Lecturers in Gandhian Studies

(c) Same as (a) and (b) above and "Specialisation in the Gandhian Studies".

Readers

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years experience of teaching and/or research provided that atleast three of these years are as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding research work.

Librarian : Please see Page No. 23 (at the end of this Advt.) for qualificationsetc.

Professor

An eminent scholar with published work of high quality actively engaged in research. Ten years of experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Candidate should have guided atleast one student for Ph.D. and that the student should have actually obtained the Ph.D. before the prescribed date in the advertisement.

Professor in Jainology

I. (a) M.A. in First or Second Class degree of recognised University with Jainology or Classical literature (Sanskrit, Prakrit, Kannada, Tamil, Hindi and Gujarati) OR Philosophy OR Indian History (Preferably Ancient or Medieval Period) OR Indian Culture.

(b) and a Doctorate degree in a subject covering Jainism, its doctrines or its cultural aspect or its literature.

(c) and Research ability evidenced by original papers, publications, etc. connected with Jainology, subsequent to the Doctoral Degree.

II. Teaching experience NOT LESS THAN TEN YEARS in a College or Postgraduate department in the University, on the subject of Jainology OR any discipline with a clear bearing on Jaina contributions.

III. Research experience either acquired or guidance to Ph.D. candidates.

(Note: What is desired is Post-Doctoral experience of not less than five years under either category).

Desirable

Knowledge of Kannada and experience in Organising a Department.

Lecturer in Journalism & Mass Communication

Essential

(i) Good academic record with atleast second class Master's degree in the subject (Communication/Mass Communication/Journalism etc.) from an Indian University or an equivalent degree from a foreign University.*

OR

At least second class (C in the seven point scale) Master's degree in Social Sciences/Sciences/Humanities with atleast a second class Bachelor's degree or Diploma in Journalism from a recognised Indian University/Postgraduate Diploma from a recognised National Institute.

Desirable

(i) Teaching experience at College or University level.

(ii) Work experience in any area of Mass Communication (Newspaper/Magazine, News Agency, Public Relations, Advertising, Radio or T.V. Journalism etc).

*Where specialists are to be recruited, Master's degree in Agricultural Journalism, Creative Writing, Extension-Family Planning Communication, Public Health Communication, Public Relations, Speech Communications and the like (but not straight Anthropology, Psychology, Sociology etc) may be entertained.

Lecturer in Administration (Management Studies)

A Master's degree in Business Administration or M. Tech. in Engineering with first class with the provision that the incumbent would acquire a doctorate degree within a period of eight years.

In the case of allied subjects like Industrial Psychology, Personnel Management, Business Statistics, Cost Accountancy etc. where Lecturers could be recruited with qualifications other than MBA and M. Tech., the minimum qualification would be the same as prescribed by the Commission for the Faculties of Arts, Social Sciences including Commerce and Sciences.

Lecturer in Law in the University and Colleges

(a) LL.M. Degree and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree from an Indian University in a relevant subject or equivalent degree from a foreign University.

If the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of a very high standard, it may relax the qualifications prescribed in (b) above.

Lecturer in Education

(a) A Doctor's degree in Education or Research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

OR

(a) A Doctor's degree in any University discipline or research work of an equally high standard; and

(b) Good academic record with an M. Phil degree in Education (which may be acquired while in service) from an Indian University or an equivalent degree from a foreign University. Having regard to the need for developing inter-disciplinary programmes one of the degrees in (a) & (b) above may be in relevant subjects, the other being in Education.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a good academic record (weightage being given to M. Phil or equivalent Degree or research work of quality) may be appointed, provided he has done research work for at least two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within eight years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

Sanskrit Shastri

A person trained in the traditional way with specialization as follows:

Vidayat or Shiromani or Acharya examination in any two of the following Shastras (i) Vyakarana (ii) Vedanta (iii) Tarka (iv) Alankara (Sahitya).

Persons having working knowledge of English and Kannada with teaching or research experience may be preferred.

Desirable : M.A. in Sanskrit or any other Indian Language.

Candidates who had applied for the posts in response to our Advertisement Notification No. KU BOA/Advt/83/720 dated 25-1-1983 should also apply again in the prescribed forms furnishing latest particulars.

**Candidates who had applied for the post in response to our advertisement Notification No. KU BOA/Advt/82/636 dated 31-12-82, should also apply again in the prescribed form furnishing latest particulars.

Good Academic Record 'Means'

University Lecturers

(i) a candidate holding a Ph.D. degree should possess at least a second class Master's degree; or

(ii) a candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) a candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

High second class may be determined as the mid-point of the starting of the second class and starting of the first class of the University from where he has obtained the degree. The qualifications now being prescribed for different categories of teachers are the minimum qualifications only to determine the eligibility for applying for the post.

At Constituent Colleges

Knowledge of Kannada is desirable

Lecturers

(a) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or equivalent degree from a foreign University; and

(b) An M. Phil degree or a recognised degree beyond the Master's level or published work indicating the capacity of a candidate for independent research work.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of a very high standard, it may relax any of the qualifications prescribed in (a) above.

Provided further that if a candidate possessing the qualifications as at (b) above is not available or not considered suitable, the University on the recommendation of the Selection Committee may appoint a person possessing a good academic record on the condition that or a recognised degree beyond the Master's level within eight years of his appointment failing which he will not be able to earn future increments till he obtains that degree or gives evidence of equivalent published work of high standard.

College Lecturers

†Good Academic Record 'Means'

- (i) A candidate holding an M. Phil. degree should possess at least a second class Master's degree; or
- (ii) a candidate not holding an M. Phil degree should possess a high second class Master's degree and a second class in the first degree (B.A./B.Sc./B.Com.) examination; or
- (iii) a candidate not holding an M. Phil but possessing a second class Master's degree should have obtained a first class in the first degree (B.A./B.Sc./B.Com.) examination.

High second class may be determined as the mid point of the starting of the second class and starting of the first class of the University from where he has obtained the degree. The qualifications now being prescribed for different categories of teachers are the minimum qualifications only to determine the eligibility for applying for the post.

Lecturer in Education

- (a) Good academic record with at least second class (C in the seven point scale) Master's Degree in Education and also Master's degree in a relevant subject (10+2 level) from an Indian University or equivalent degrees from a foreign University; and
- (b) An M. Phil degree or a recognised degree beyond the Master's level or published work indicating the capacity of a candidate for independent research work.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of a very high standard, it may relax any of the qualifications prescribed in (a) above. Provided further that if a candidate possessing the qualifications as at (b) above is not available or not considered suitable the University on the recommendation of the Selection Committee may appoint a person possessing a good academic record on the condition that he will have to obtain an M. Phil degree or a recognised degree beyond the Master's level within eight years of his appointment, failing which he will not be able to earn future increments till he obtains that degree or gives evidence of equivalent published work of high standard.

†Appointment to the posts may be permanent, depending upon the nature of the vacancy and the requirements of the University. In such cases, they will be on probation for one/two years according to the rules of the University.

posts, may be posted in the beginning or at a later date to work either at Dharwad or at any of the P.G. Centre(s) though the posts are shown as existing at a particular place at the time of advertisement.

If candidates belonging to Scheduled Caste, Scheduled Tribes, Backward Tribes, Backward Communities, Backward Castes and other reserved categories are not available the said vacancies will be filled up in accordance with the latest Government instructions in this behalf. Applicants belonging to Scheduled Caste/Scheduled Tribe (Form-I), Backward Communities, Backward Caste/Backward Tribes (Form-2) and to the Special Group (Form-3) are required to produce a certificate in the prescribed form issued by the authorities empowered to issue such certificates in support of their claims along with their applications. Such certificates should not have been issued earlier than one year by the competent authorities empowered to do so.

In addition to the posts reserved for scheduled caste and scheduled tribe, preference shall also be given to persons belonging to Scheduled Caste/Scheduled Tribe in respect of even the the opinion of the Board, such persons possess suitable qualifications.

The entitlement of a person to be eligible for appointment against the quota "Other Backward Classes" shall be determined not just on the basis of a Caste certificate, but rather on the basis of a Caste-cum-income certificate, which would include **income of his own** together with that of his parents and, if either of the parent is dead, of his legal guardian.

In a recruitment to a category of posts or service if persons belonging to the Backward Tribes or the Special Group are not available for being selected for the vacancies reserved for them, such vacancies shall be filled by selection of candidates on the basis of general merit.

Instructions to the candidates

- (1) Age limit to apply for the said posts below 50 years.
- (2) To count one academic year as one year teaching expreience.
- (3) Candidates desirous to apply for the post should necessarily affix pass port size photo on the

UNIVERSITY NEWS

A Weekly Journal of Higher Education & Research

(Published on : 1, 8, 16 & 23 of every month)

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right side at each of the application.

4) Canvassing directly or indirectly would disqualify the candidate.

5) Incomplete applications are liable to be rejected.

6) The number of posts specified above is subject to variation depending upon the needs of the University.

7) It is open to the University to fill up or not to any of the posts now advertised.

8) Application fee once remitted to the University is not refundable under any circumstances. Separate application along with enclosures is required to be submitted for each post. One set of application cannot be considered for more than one post.

(9) No T.A./D.A. will be admissible either for attending the interview or for joining the post if selected.

Applications should be sent by Registered Post A.D. so as to reach the Registrar, Karnatak University, Dharwad-580003, not later than **25-6-1984**.

Qualifications for the post of Librarian

(a) First or second Class M.A./M.Sc./M.Com., plus a First or second class B. Lib. Science or a diploma in Library Science. The degree of M. Library Science being a preferential qualification.

(b) At least 10 years experience as Librarian or in a responsible professional capacity in a University Library.

(c) Good academic qualifications and research experience (with publications). The qualifications must be in general, comparable to those of Professors in the Universities.

REGISTRAR

VIKRAM UNIVERSITY
UJJAIN

No. Admn/Estt/SST/84/1791

Dated : 28-5-1984.

ADDENDUM

In continuation of this office advertisement No. Admn/Estt/SST/Advt/84/1298 dated 18-5-84, applications are also invited for one post of **Lecturer in Chemistry** on the prescribed form available from the University office on payment of Rs. 10/-, so as to reach by **23rd June 1984**. Other conditions are unchanged.

REGISTRAR

UTKAL UNIVERSITY
CENTRE OF ADULT EDUCATION, CONTINUING EDUCATION & EXTENSION PROGRAMME
(U.G.C. SCHEME)

Advertisement No. NAEP/II-23/58

Dated 31.5.84

Applications in seven copies are invited in the prescribed form alongwith attested copies of certificates and Mark lists of all examinations passed for the following posts in the Department of Adult, Continuing Education & Extension Programme of the University on or before the **20th June, 1984**. All the posts are upto 31st March, 1990.

1. Director —One
2. Asst. Director —Two
3. Project Officer —Two (one leave vacancy)

Scale of Pay

(i) Director
Rs. 1500-60-1800-100-2000/-

(ii) Asst. Director
Rs. 1100-50-1300-60-1600/-

(iii) Project Officer
Rs. 700-40-1100-50-1300/-

Director

Qualifications & Experience

(a) First or Second Class Master's Degree of an Indian University or an equivalent qualification of a foreign University in Adult Education/Special Sciences/Social work.

(b) A research degree of the doctorate standard in any of the social sciences, education, adult education or on the basis of review of published research carried out.

(c) About ten years experience in programme planning, administration and teaching.

(d) Persons with experience in community development projects with emphasis on adult/non-formal education will be preferred.

NOTE: Conditions of experience and/or qualifications for the post may be relaxed in very special cases for very experienced persons if suitably qualified candidates are not available, on the recommendation of the Selection Committee.

Salary Scale : Rs. 1500-60-1800-100-2000/- plus admissible allowances. If a professor holding a substantive post is selected, from the same University he/she will be permitted to carry the scale and salary and other benefits.

Asst. Director

Qualification & Experience

(a) Post Graduate Degree atleast in the Second Class in one of the social sciences/social work/adult education or an equivalent qualification of a foreign University. A person with a doctorate in any of these areas will be preferred.

(b) Experience of research, teaching and/or field work of atleast 2 years/experience of field work or extension work will be preferable and experience of teaching and research work will not be necessarily essential. The requirement of experience should not be more than two.

(c) Salary Scale : Rs. 1100-50-1600/- plus admissible allowances (If Reader holding a substantive post is selected from the University concerned he/she will be permitted to carry the scale and salary and other benefits).

Project Officer

Qualifications & Experience

Post Graduate Degree in Second Class in social work, social science, adult education with two years experience in community work. Requirement of experience will not be necessary if the candidate has necessary aptitude for this work.

Salary Scale : Rs. 700-40-900-EB-40-1100-50-1300/- plus admissible allowances (If a lecturer holding a substantive post is selected from the University concerned. He/She will be permitted to carry the scale and salary and other benefits).

Prescribed application forms can be had from the Registrar, Utkal University in person on payment of Rs. 7.60 including local sales tax (Rupees Seven and paise sixty) only or by post on receipt of a Crossed Indian Postal Order for Rs. 10/- (Rupees ten) only payable to the Registrar, Utkal University, Vani Vihar, Bhubaneswar-751004.

P.K. Das
REGISTRAR

TATA INSTITUTE OF SOCIAL SCIENCES

POST BOX NO. 8313
SION-TROMBAY ROAD
DEONAR, BOMBAY 400 088

Applications are invited for the following posts. The prescribed form along with the details of qualification, experience, etc., should be obtained from the above address either in person or by post along with a stamped (Rs. 1.50) self addressed envelope superscribed "Request for application form for teaching posts."

I. **Readers** (2 Posts) : One in the Department of Personnel Management and Industrial Relations and One either in the Unit for Child and Youth Research or Unit for Research and Consultancy in Social Policy and Social Welfare Administration, in the Pay-Scale of Rs. 1200-50-1300-60-1900+ D.A. and other allowances. Total emoluments in the minimum of the scale Rs. 2434.75 per month and in the maximum Rs. 3369.75 per month.

II. **Lecturers** (17 posts) : one in Social Work; Two in the Department of Family and Child Welfare; Two in the Department of Urban and Rural Community Development; Two in the Department of Social Welfare Administration; One in the Department of Personnel Management & Industrial Relations; One in the Unit for Child and Youth Research; One in the Unit for Sociology of Education (temporary); Two in the Unit for Urban Studies; One in the Unit for Research and Consultancy in Social Policy and Social Welfare Administration; One in the Unit for Audio-Visual Records; One in the Unit for Women's Studies; One in the Unit for Family Studies; and One in the Department of Medical and Psychiatric Social Work; in the Scale of Pay of Rs. 700-40-1100-50-1600 + D.A. and other allowances. Total emoluments in the minimum of the scale will be Rs. 1668.25 per month and at the maximum of the scale will be Rs. 2884.75 per month.

Of the above 17 posts of Lecturers, 5 are reserved for persons belonging to SC/ST categories. The Selection Committee will decide the Department/Unit in which reservation of post is to be made for SC/ST candidates depending upon the availability and suitability of candidates belonging to SC/ST category.

III. **Research Assistants** (2 posts) : One in the Department of Research Methodology and one (temporary) in the Unit for Child and Youth Research in the Pay Scale Rs. 500-20-700-25-900 plus D.A. and other allowances. The total emoluments in the minimum of the scale will be Rs. 1213.60 per month and at the maximum of the scale will be Rs. 2098.75 per month.

The last date for request for application form **20-6-1984.**

N. K. Krishnamoorthy
REGISTRAR

ANDHRA PRADESH AGRICULTURAL UNIVERSITY

ADMINISTRATIVE OFFICE
'RAJENDRANAGAR'
HYDERABAD 500030
Advertisement No. 2/RC/84
Dated : 25.5.84.

Applications in the prescribed form together with a registration fee of Rs. 5/- are invited for the undermentioned posts in the Andhra Pradesh Agricultural University so as to reach the undersigned on or before **20th June, 1984.**

1. **Dean, Faculty of Agriculture**
2. **Dean, Faculty of Post Graduate Studies.**
3. **Director of Agricultural Experiment Stations (Director of Research)**

Scale of Pay : Rs. 1500-60-1800-100-2000-125/2-2500 and special pay of Rs. 250/- in addition to usual allowances admissible as per University Rules.

Qualifications

1. Dean, Faculty of Agriculture

Essential

(a) A Bachelor's degree in Agriculture in the Faculty of Agriculture.
(b) A Ph.D. degree in any branch of Agricultural Sciences.
(c) A total experience of not less than 20 years in Teaching and/or research and/or extension in Agriculture, out of which atleast 7 years should have been in the cadre of Professor/Senior Scientist/Assoc. Director of Research.

Note: Must have worked for atleast 3 years in teaching as Professor.

(d) Administrative experience as Head of a Department of College/Research Station in Colleges of Agriculture/a recognised institute.
(e) Notable contributions to his credit in the field of his specialisation during the last 8 years.

2. Dean, Faculty of Post Graduate Studies.

Essential

(a) A Bachelor's degree in the faculties of Agriculture/Veterinary/Home Sciences.
(b) A Ph.D. Degree in any branch of Agricultural Science/Veterinary Science/Home Science.
(c) A total experience of not less than 20 years in teaching and/or research and/or extension in any of the three faculties out of which at least 7 years should have been in the cadre of Professor/Senior Scientist/Associate Director of Research.

Note: Must have worked for atleast 3 years in teaching as Professor.

(d) Administrative experience as Head of a Department of College/Research Station in any of the three faculties/a recognised Institute.
(c) Notable contributions to his credit in the field of his specialisation during the last 8 years

3. Director of Agricultural Experiment Stations (Director of Research)

Essential

(a) A Bachelor's Degree in Agriculture in the Faculty of Agriculture.
(b) A Ph.D. degree in any branch of Agricultural Sciences.
(c) A total experience of not less than 20 years in teaching and/or research and/or extension in Agriculture, out of which not less than 7 years should have been in the cadre of Professor or equivalent post with not less than 3 years research experience.
(d) Administrative experience as Head of a Department of College/Research Station in Colleges of Agriculture/a recognised Institute.
(e) Notable contributions to his credit in the field of his specialisation during the last 8 years.

The term of appointment shall be three years, and extendable for another term not exceeding three years.

Persons already in service must submit their applications through their employers, with an advance copy to the University direct.

Application forms can be had from the Registrar, Andhra Pradesh Agricultural University, Administrative Office, Rajendranagar, Hyderabad-500030 on remitting Rs. 2/- in person or Rs. 5/- uncrossed Postal Order for obtaining it by post.

Applicants when called, shall appear before the Selection Committee for an interview at their own cost unless special exemption has been given to them.

Shaik Mowla
REGISTRAR

GAUHATI UNIVERSITY

GAUHATI-781014

Advertisement No. 7 of 1984.

Applications are invited for the following posts:

1. Professor of Physics : One post (Permanent).

Specialisation : X-Ray crystallography/Theoretical Solid State Physics/ Mathematical Physics.

2. Professor of M.I.L. : One post (Permanent).

Specialisation : M.A. in any Modern Indian Language or in Sanskrit or in Comparative Philology or in Linguistics and Ph. D. in the subject; Specialisation in Assamese language and literature.

3. Professor of Folklore : One post (Permanent).

Specialisation : Folklore of N.E. India including traditional art forms, performing and visual.

4. Professor of Law : One post (Permanent, 6th Plan).

Specialisation : Open.

5. Professor of Geography : One post (Permanent).

Specialisation : Urban & Social Geography with adequate knowledge of Quantitative methods in Geography.

6. Professor of Zoology : One post (Permanent).

Specialisation :- Cell Biology/Entomology/Fish and Fishery Biology/ Animal Physiology/Animal Ecology.

7. Professor of Philosophy : One post (Permanent).

Specialisation : Open.

8. Professor of English : One post (Permanent).

Specialisation : American Literature (20th century)/Theory and History of Criticism with special reference to Poetry/Linguistics with special reference to the English Language.

9. Professor of Commerce : One post (Permanent).

Specialisation : Open.

10. Reader in English : One post (Permanent).

Specialisation: American Literature (20th century)/Theory and History of Criticism with special reference to Poetry/Drama with knowledge of dramaturgy.

11. Reader in History : One post (Permanent).

Specialisation : Open.

12. Reader in Zoology : One post (Permanent).

Specialisation : Entomology/Cell-Biology/Fish and Fishery Biology/ Animal Physiology/Animal Ecology.

13. Reader in Geology : One post (Permanent).

Specialisation : Either in Precambrian Metamorphites or Sedimentary Petrology.

14. Reader in Law : One post (permanent).

Specialisation : Open.

15. Reader in Statistics : One post (Permanent).

Specialisation : Open.

16. Lecturer in History : Two posts (Permament)

Specialisation : For 1st post Mediaeval Indian History.

For 2nd post Ancient Indian History.

17. Lecturer in Library Science : Two posts (Permanent).

Qualification : Consistently good academic record with First or High Second Class (B+) in M. Lib. Sc./ M.L.I.Sc. or an equivalent degree from a foreign University.

(b) At least two years experience of working in a recognised library in a responsible professional capacity.

(c) Research/reference publications are desirable.

(d) Teaching experience in Library Science is preferred.

18. Lecturer in Commerce : Two posts (Permanent).

Specialisation : For 1st post—Statistics with Econometrics with Economics at the Degree level.

For 2nd post--Marketing/Accountancy.

19. Lecturer in M.I.L. : Three posts (Permanent)

(Specialisation : For 1st post—Oriya having some training in Linguistics with Ph.D. in Comparative Literature.

For 2nd post—M.A. in Tamil with some training in Linguistics with Ph.D. Tamil/Comparative literature.

For 3rd post—M.A. in Assamese (A/B) with a good background of Sanskrit or M.A. in Sanskrit with adequate knowledge of Assamese and Ph.D. in the subject.

20. Lecturer in Zoology : One post (Permanent).

Specialisation : Cell-Biology.

21. Lecturer in Hindi : One post (6th Plan-Permanent).

Specialisation : Open.

22. Lecturer in Persian : One post (Temporary, Leave vacancy).

Specialisation : Open.

23. Lecturer in Political Science : One post (Permanent). M.A. in Political Science with specialisation in Sociology or, M.A. in Sociology.

UNIVERSITY SERVICE AND INSTRUMENTATION CENTRE

24. Professor/PSO : One post (Permanent—6th plan).

25. Reader/SSO : Two posts (Permanent—6th Plan).

26. Lecturer/SO : Two posts (Permanent—6th plan).

27. Mechanical Engineer : One post (Permanent—6th Plan)

28. Electronics Engineer : One post (Permanent-6th Plan).

Scales of Pay

1. Professor: Rs. 1500-60-1800-100-2000-125/2-2500.
2. Reader: Rs. 1200-50-1300-60-1900
3. Lecturer:—Rs. 700-40-1100-50-1600.
4. P.S.O. : Rs. 1500-60-1800-100-2000
5. S.S.O. : Rs. 1100-50-1600.
6. S.O. : Rs. 700-40-900-E-B-40-1100-50-1300.
7. Mechanical Engineer/Electronics Engineer : Rs. 1200-50-1300-60-1900.

All posts carry usual allowances admissible under the University rules in force from time to time.

In case where specialisation has not been mentioned against a post candidates should state their areas of specialisation at the Master's and Doctor's degree levels.

Essential Qualifications

Professor : An eminent scholar with published work of high quality actively engaged in research. Ten years' experience of teaching and/or research. Experience of guiding research at Doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Reader : Good academic record with a Doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that atleast three of these years were as Lecturer or in an equivalent position. This condition may be relaxed in the case of candidates with outstanding research work.

Lecturer : (a) A Doctor's degree or research work of an equally high standard, and (b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University. Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M. Phil. or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research Laboratory/Organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn further increments until he fulfils these requirements.

Professor of Law : (a) Consistently good academic record with First or high second class (B+) Master's degree in Law or any equivalent degree of a foreign University. (b) Experience of 10 years post-graduate or 15 years under graduate teaching. (c) Experience in guiding and promoting research.

Preferential : A. Doctor's degree in Law or published work of an equally high standard.

Reader in Law : (a) Consistently good academic record with First or High Second Class (B+) Master's Degree in Law or any equivalent degree of a foreign University.

(b) Experience of at least eight years' teaching in Law.

Preferential : A Doctor's Degree in Law or published work of an equally high standard.

Professor/PSO : At least Second Class Post-graduate degree in Engineering (M. Tech./M.E.) or doctorate in Science or equivalent published work of high quality, actively engaged in research. Ten years of experience in teaching and/or research with (i) proven ability in designing and building major instruments, (ii) capacity to lead and direct R and D activity in instrumentation, (iii) working knowledge with modern analytical instruments or outstanding scholar (engineer or scientist) who has made significant contribution to instrumentation.

Reader/SSO : At least second class post-graduate degree in engineering (M. Tech/M.E.) or Doctorate degree in science or equivalent research work of high standard. At least five years' experience in R and D of instruments or in operation, repair and maintenance of modern instruments and five years teaching experience in his field of specialisation.

Lecturer/SO : At least second class B.E/B. Tech/M.Sc. with two years of experience in operation of sophisticated instruments, its repair and maintenance. A flair for R and D activity in instrumentation is desirable.

Mechanical Engineer : At least second class M.E. or M. Tech. degree in Mechanical Engineering (or equivalent degree) with 5 year's experience in R and D of Instruments, or in operation, repair and maintenance of modern sophisticated instruments and with 5 years of Teaching experience in the subject.

Electronics Engineer : At least second class M.E. or M. Tech. in Electronics (or equivalent degree) with 5 years' experience in R and D of electronic instrumentation or in operation, repair and maintenance of sophisticated instruments.

Applications in plain paper in six copies giving full Bio-data including (1) Name in full (in block letters), (2) Father's name, (3) Date of bi [illegible] Christian era, (4) Permaner [illegible] dence and address (in full), (b) [illegible] address (in full), (5) Present [illegible] tion if any and name if employer, (6) Present salary drawn (if any), (7) Detailed academic career with marksheets and subjects studies (including Honours) in degree and post-graduate courses from Matriculation/Higher Secondary/High School Leaving Certificate Examination onwards and copies/reprints of research contributions, (8) Name and address of two referees not related to candidate together with an application fee of Rs. 10.00 (Rupees ten), (Rs. 7.50 in case of Scheduled Caste/Scheduled Tribe candidates) by CROSSED INDIAN POSTAL ORDER drawn in favour of the Registrar, Gauhati University payable at the Gauhati-781014 Post Office should be sent in an inner sealed cover superscribed application for the post of (Name of post applied for) Advt. No. 7 of 1984 enclosed in an outer cover addressed to the Registrar, Gauhati University, Gauhati-781014 to reach him not later than **30th June, 1984.**

The number of this advertisement and name of the post applied for must be referred to in the application.

Persons in employment should apply through proper channel or with a no objection certificate from the present employer.

Candidates will be required to appear at an interview if and when called for.

Canvassing directly or indirectly will be a disqualification.

M.C. Bhuyan
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY

P.O. IIT, POWAI, BOMBAY-400 076

Advertisement No. A-204/84.

Applications are invited for the following permanent posts at this Institute, in the prescribed form obtainable free of charge from the Registrar, Indian Institute of Technology, P.O. IIT, Powai, Bombay - 400 076 on request accompanied by self addressed envelope (25 cm x 10 cm). Applicants should give an account of their academic and professional record and list of research publications. Persons employed in Government/Semi-Government Organisations or Educational Institutions should apply through proper channel. Indian candidates abroad may apply on plain paper in duplicate. The posts carry allowances such as D.A., C.C.A. H.R.A., as per rules of the Institute which at present correspond to those admissible to the Central Government employees stationed at Bombay. Depending on qualifications and experience, higher salary may be offered. A candidate may be considered for a lower position of a Lecturer if not recommended for the post of Assistant Professor. Completed applications should reach the Registrar, [illegible] Powai, Bombay - 400 076 on or [illegible] 2nd July, 1984.

[illegible] posts of Lecturer are reserved [illegible] the candidates belonging to SC/ST community.

Assistant Professor : Scale of Pay: Rs. 1200-50-1300-60-1900.

Lecturer : Scale of Pay : Rs. 700-40-1100-50-1600.

Total emoluments on the minimum of the scale excluding H.R.A.

On basic pay of Rs. 1200/- total emoluments Rs. 2275/-

On basic pay of Rs. 700/- total emoluments Rs. 1529.35.

Assistant Professor

Qualifications & Experience

Consistently good academic record with a Doctorate degree in the relevant field. About 5 years experience in teaching and/or research and development.

Candidates not possessing Ph.D. may also be considered if they have to their credit published research work or design/development work of high standard either in an Institution or in an Industry.

Lecturer

Qualifications & Experience

Master's degree in appropriate field in Engineering/Science/Technology.

Minimum one year's experience in teaching/research/industry.

Areas of Specialisation : (in one or more of the following).

1. **Department of Aeronautical Engineering** : (No. of Vacancies : Four).

Aircraft Design; Aircraft Propulsion; Aircraft Structures; Aircraft Production;

Aerodynamics; Control and Guidance.

2. **Department of Civil Engineering** (No. of Vacancies: Three).

(i) **Transportation Engineering**

Transportation Planning and Management; Traffic Engineering; Highways and Railway Engineering.

(ii) **Structural Engineering**

Structural dynamics with sound analytical and numerical background. A good knowledge of experimental methods in dynamics is desirable.

(iii) **Geotechnical Engineering**

Soil improvement, Soil dynamics. Good experimental background is desirable.

3. **Department of Mathematics** : (No. of Vacancies: One).

(i) **Statistics and Operations Research**

Stochastic Processes or Statistical Inference.

(ii) **Computer Science**

System Programming.

4. **Department of Mechanical Engineering** : (No. of Vacancies: One).

Nuclear Energy Conversion

Reactor Heat Transfer (including liquid metal) Reactor Core Sudies and Design; Nuclear Power Reactor-Design/Fabrication/Construction / Testing Operation; R and D in Naional Laboratories in the field of Nuclear Power Development.

Research Associate : Temporary position.

Research Associate in the Department of Mechanical Engineering in the field of Nuclear Energy Conversion is a temporary position for a period not exceeding three years. Applications should be made on plain paper.

Age : Below 35 years (Below 45 years in the case of SC/ST candidates).

Research Associateship : In the range of Rs. 1100 to 1500 (consolidated).

Contingency Grants : Rs. 3000/- per annum. (Rs. 4000/- p.a. for SC/ST candidates).

Qualifications

Consistently bright academic record with a Ph.D. in the field mentioned above under Mechanical Engineering.

Printed & Published by M.S. RAMAMURTHY, on behalf of the Association of Indian Universities,
AIU House, 16 Kotla Road, New Delhi 110002. Grams : UNIBOARD. Phones : 276504 & 273037.
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University News

UNE 16, 1984

Re. 1.00

IX SOCIAL SCIENCES CONGRESS
ALIGARH MUSLIM UNIVERSITY
16-19, APRIL 1984
INDIAN ACADEMY OF SOCIAL SCIENCES

Giani Zail Singh, President of India inaugurating the IX Indian Social Science Congress at Aligarh Muslim University. On his left are: Prof. (Mrs.) K.S. Khan, Prof. K.M. Bahauddin, PVC, Shri Saiyed Hamid, VC and Prof. Virendra Kumar, President, ISSC.

CLASSIFIED ADVERTISEMENT

GUJARAT AGRICULTURAL UNIVERSITY
SARDAR KRUSHINAGAR-385506, DISTRICT : BANASKANTHA

Advertisement No. : 2/84

Applications in prescribed form are invited for the Principals of the following constituent colleges of the Gujarat Agricultural University. The candidates who fulfil the following qualifications and desire to apply may send their applications with six copies of authenticated bio-data through proper channel to the Registrar, Gujarat Agricultural University, Sardar Krushinagar : 385506, Dist : Banaskantha.

Name of the Post and Pay Scale.	Required Qualifications and Experience
Principal of	**Essential**
(1) Sheth M.C. College of Dairy Science, Anand.	1. Second Class Bachelor's degree in the concerned faculty.
(2) Aspee College of Nutritional Science and College of Home Science and Food Technology, Sardar Krushinagar.	2. Second Class Master's degree in the concerned faculty. 3. Ph.D. in a subject related to the concerned faculty.
(3) College of Agriculture Engineering and Technology, Junagadh.	4. At least 10 years' experience of teaching/research/extension in the concerned faculty, out of which atleast 5 years' experience will be as Professor or its equivalent.
Pay Scale Rs. 1500-60-1800-100-2000-125/2-2500 in addition to other normal allowances as per state Government rules as well as rent free bungalow.	5. Good knowledge of the educational system prevalent in the world and familiarity with modern concept of organisation and co-ordination of the teaching, research and extenstion education activities. Age Below 48 years.

Note

1. Age relaxable in case of outstanding candidates and in case of person already in the employment of the University for Principals of Agricultural Engineering and Home Science Colleges.
2. Age and experience relaxable in case of outstanding candidate and in case of suitable person already in the employment of the university for the Principal of Dairy Science College.
3. Period spent under P.G. Training except inservice P.G. Training will not be considered as experience.

Application forms and other terms and conditions can be had from the Registrar, Gujarat Agricultural University, Sardar Krushinagar-385 506, District-Banaskantha, on cash payment of Rs. 2/- (Money orders will not be accepted) or by sending crossed Indian Postal Order of equal amount issued in favour of "Comptroller, Gujarat Agricultural University, Sardar Krushinagar" alongwith the self addressed envelope (23 x 11 Cms.) affixed with Rs. 1.30 paise postage stamps. The last date for obtaining the application forms for the posts shown above is **30-6-1984**.

The candidates already in the service of this University have to apply through their respective officers in prescribed proforma with six copies of authenticated bio-data without I.P.O. All candidates should send their application through proper channel. All candidates called for interview will have to attend the same at their own cost.

1. The last date for receiving applications complete in all respects is **15-7-1984**.
2. Incomplete applications will not be considered.
3. Only those who fulfil the qualifications should apply before time limit.
4. The University reserves their full rights to fill up or not to fill up any or all the posts and to give or not to give appointment to the candidates selected by Selection Committee.
5. Canvassing in any form will completely disqualify a candidate for employment under this University.
6. The person selected on the Principal's post is transferable to any centre of the University on any post carrying the same pay scale.

R.J. Patel
REGISTRAR

ASSOCIATION OF INDIAN UNIVERSITIES
16, Kotla Marg, New Delhi-110002

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Dr. Jagdish Narain

UNIVERSITY NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :

M.S. RAMAMURTHY

Indian Social Science Congress

The President of India, Giani Zail Singh, inaugurated the IX Indian Social Science Congress, which was held at Aligarh from April 16 to 19th, 1984. His inaugural address is given below.

I am glad to be here today and to inaugurate the IX Indian Social Science Congress. The theme of the Congress chosen by you, "STATE AND SOCIETY IN INDIA" is very topical and I congratulate the Indian Academy of Social Sciences for focussing attention on this. Present in this gathering are distinguished scholars drawn from different universities and research institutions in our country. Also represented here are a wide range of social science disciplines, from economics, history and sociology to philosophy, education and linguistics. Although these disciplines have their own professional associations, which meet periodically, to deliberate over matters of intellectual moment, such meetings do not provide an opportunity to scholars from different disciplines to interact with each other. This Congress of the social science disciplines as a whole is a unique institution, with profound implications for the generation of knowledge relevant to our social development. I welcome the creation of such a forum which offers an unrivalled opportunity to scholars in different disciplines to discuss problems of mutual interest with each other, and through such interaction, to generate knowledge which would help us to understand as well as to transform our society.

It is, so I believe, singularly appropriate that the IX Social Science Congress is being hosted by the Aligarh Muslim University. It gives me particular pleasure to be present at a Congress which is being held in this great University, for which I have a special affection. Perhaps the noble traditions upon which the Aligarh Muslim University rests are too well-known to the scholarly community to be recounted at the present juncture. Suffice it to mention, that when it was established, in the late 19th century, under the distinguished leadership of Sir Syed Ahmad Khan, one of the greatest Indians of that age, it pioneered in laying the basis for the scientific and cultural growth of our country. These noble traditions were nurtured and developed by generations of eminent scholars who have held professorial positions in this university; and who have left an indelible impression upon the minds of those young students who received their education under its aegis. It is a matter of special satisfaction to me, that under its present leadership, the Aligarh Muslim University is living up to the worthy traditions associated with its past.

Indeed, it is a matter of historical record, that in no other country has the intellectual been accorded the dignity which he has been accorded in India. Yet if we can draw satisfaction from the past, it is equally necessary for us to look at the present, and build for the future. What are the changes which are taking place in our country contemporaneously? How do these changes, whether they pertain to the material or to the moral domain, affect the life of our people? How should our society be transformed if the lot of the common man is to be improved. What are the instruments which the intellectual community, particularly social scientists, can shape to bring about social progress in India? These are some of the questions to which scholars can address themselves. We have, today, a more active view of the role of the intellectual than we had in the past. We believe that the intellectual shapes values which can inspire, as well as inform, the people, and also prepare them for the vital tasks of nation building.

May I request the scholars who have assembled here, to address themselves to national issues in the spirit which I have suggested, and in doing so, lay the basis for a creative social transformation of India.

Ours is a civilisation of antiquity which has a recorded history of three millennia and more. The contribution of our civilisation to the sciences, to philosophy, religion and literature, and to the performing and visual arts; is known throughout the world. Equally outstanding is the material culture which we have built over the centuries and which rests upon the labour of our people. The productivity of our agriculture was the envy of all these who came to our land; as was the skill of our artisans, whose products were famous for their craftsmanship, and combined utility with beauty in finely balanced proportions.

Perhaps the material and intellectual achievements of our civilisation need to be explored in depth by social scientists. What were the distinctive and unique features of this civilisation? How were they reflected in the production of material values and in the domains of religion and culture? The creative genius which produced this unique civilisation need to be understood in all its diversity. In the changing circumstances of our times, there is as much need for continuity, to sustain the social order, as there is need for change, to build a better future. We, therefore, need to understand our past and our present in order to build for ourselves a better future.

Some of the questions which I have raised can be satisfactorily answered on the basis of the immortal truths which the great men of our past—philosophers, religious teachers and statesmen—have bequeathed to posterity. Ours is a composite culture which teaches forbearance and regard for others to man. Ours is also an integral culture which proclaims the message of humanism and love to the world at large. It is through such noble characteristics that the civilisation of India has, over the centuries, acquired so enviable a reputation for tolerance and catholicity.

Among the values which have sustained India over the ages, more particularly in recent times, is the value of secularism. This value constitutes, so I believe, one of the most fundamental values of our society. The ideal of secularism links different religious communities in the country—Hindus, Muslims, Sikhs, Christians, Buddhists, Jains and others—in firm bonds of loyalty to the nation. Here I would like to emphasise the fact that the concept of secularism, as it has developed in India, is different from the way this concept is understood in the West. The Indian concept of secularism, which to my belief is a particularly noble definition of this concept, does not involve a denial of our rich religious heritage, which heritage is very dear to the people and provides them with a vision of the good life. The Indian definition of secularism rests on the belief that all the religions known to mankind seek common moral objectives and identical social goals. Inspired by this belief, secularism in India gives equal dignity and extends equal regard to all religions.

With these few words, I conclude by thanking the Indian Academy of Social Sciences for inviting me here and giving me an opportunity to meet you all and share my thoughts. I have pleasure in formally inaugurating your Congress and wishing success to your deliberations. ☐

Continuing Education of Engineers in Developing Countries Like India

Text of the paper presented by Dr. K. Gopalan, Vice-Chancellor, University of Cochin, to the World Conference on Engineering and Engineering Technology Education held at Cologne, from April 16-19, 1984 on the theme of Continuing and Further Education.

Need and Objectives

According to the University Grants Committee (UK), continuing education is "any form of education, both vocational and general, that is resumed after an interval following the end of continuous initial education".

Engineering education which is a pre-requisite for sustaining the complex structure of modern civilisation is considered a sine qua non for the achievement of socio-economic goals. Every country has to strengthen its own capacity to generate and assimilate technology. Science and technology are developing too fast and so are their potential applications—both in extent and diversity. The growing body of scientific and technical knowledge and its repeated obsolescence call for more frequent occupational updating. Several trends also indicate that in future engineers will experience a larger number of career changes than has been traditional. This means that they will have to acquire new knowledge increasingly frequently during their working lives. It is necessary to recognise publicly and to publicise widely that continuing education programmes are a normal part of engineering profession.

The basic objectives of continuing education of engineers in fast developing countries like India should be:

- — development of specialist knowledge in specified fields of national relevance;
- — strengthening of the ability of innovation, adaptation and optimisation in the matter of design and development of engineering system;
- — training in research methodology and real-life problem solving;
- — strengthening the perception of the technological resources and needs of the country and the development of competence for technological assessment for a given application;
- — training in competent handling of problems of technology transfer, whether from a research laboratory to a manufacturing industry or from one social framework to another; and
- — development of strong interaction between universities and industry through sharing of facilities and expertise, and through solution of industrial problems.

Although the problems of rural relevance are intimately connected with the progress of all developing countries, they have been conventionally viewed as being outside the mainstream of science and technology. These problems should be the legitimate concern of continuing education programmes in engineering and technology. The set of traditional technologies which the bulk of humanity had evolved over the centuries has become increasingly inadequate in the context of rising expectations, changed circumstances, increasing population and depleting resources.

Problems and Constraints

Continuing and further education programmes of engineers in developing countries have to counter many problems. Some of them are :

- — Continuing education has to depend upon several multimedia resources such as correspondence, audio-visual aids and broadcasting for the transmission of knowledge. There are in-built constraints to the use of such resources—especially when technological support systems are required. Many of the public utility systems such as electricity supply, telephone, post and telegraph service and public transport are not dependable.
- — There is sometimes too much of pre-occupation trying to master the nuances of advanced communications technology. Continuing education does not have to be necessarily delivered in very sophisticated technologies.
- — There are difficulties in producing high quality software and course-ware, upon which depend the ultimate success of continuing education programmes. Instead of focussing attention on what is to be taught, compilers of video tapes concentrate on applying technical standards more appropriate to the film industry. Writers of computer software, many of whom are without training in education, tend to devise materials which are elegant in terms of the use of computer

technology, but bad for teaching because the writers do not know the subject.

— Many people continue to entertain the unreasonably restrictive conception that a bachelor's degree is sufficient preparation for most engineering work. For a variety of reasons, the industry cannot also afford to spare their engineering personnel for continuing and further education programmes.

— There is a belief that some of the continuing education programmes are meant to give paper qualifications to those who could not make it otherwise. Post-graduate degrees acquired through correspondence and distance education programmes are seldom given the parity of esteem with those acquired through full-time programmes. Even in advanced countries, the open university degrees are sometimes referred to as 'arm-chair degrees'. They carry the stigma of second class status.

— Universities do not like to be diverted from the green pastures of their discipline-based research interests and related teaching. There are 'inter-face problems' between universities and industry. Universities stand indicted for their apparent indifference to the real needs of society.

Present trends and future possibilities

Though developing countries are lagging behind the advanced countries in the field of professional updating of engineers, they have recognised the necessity for and importance of updating engineers through various types of continuing and further education programmes. Such programmes are catching up in many developing countries albeit at varying degrees of certitude.

Universities and industry have now realised and accepted that the traditional pattern of formal engineering education cannot equip graduates with the necessary expertise to harness the fast changing scientific and technological developments. Continuing education is gradually evolving from a marginal activity of the universities to one of their principal responsibilities, as is now evident from the national policy resolutions of several developing countries. Many universities have started offering a variety of 'correspondence', 'off-campus', 'extra-mural', 'extension' and 'non-formal' programmes—however imperfect they may be—for the professional updating of engineers. Some countries like Nigeria and India have recently established 'open universities' more or less on the UK pattern. To organise continuing education properly and well, it may be necessary to separate it conceptually, structurally and administratively from the more central activities that are at the core of a university's function. It is also important to provide different and relevant incentive systems to the faculty to ensure their involvement and participation in the entire programme.

The expansion in continuing education services has been based mostly on the print media. It has been and it will continue to be the most important component in the continuing education services in the developing countries. The use of non-print communication technologies such as radio, television, audio and video casettes and computers is slowly picking up. The technologies used are mostly related to the existing low technological level of the country concerned. Developing countries cannot afford to gloss over the technological constraints which are hamstringing continuing education. Such constraints have to be identified and ways and means found for countering them. To counter the failure of public utility systems, it is reported that the open university in Nigeria has planned its own independent courier service, electricity supply, broadcasting and telecasting arrangements. Some developing countries like India have established the infrastructure to provide educational programmes via satellites on a permanent basis.

Many large industries and commercial establishments organise induction and updating courses for their engineers. Some of them have formed partnerships with well-established technological universities, which offer various types of continuing education programmes including industry-oriented full-time and part-time post-graduate courses, the 'post-graduate projects' being done in the industry. There is considerable demand and scope for this sort of activity.

The multi-disciplinary programmes in continuing education are creating inter-departmental flows and co-operation. They are making a positive impact on staff development and providing opportunities for cumulative improvement in pedagogic quality. Universities and industry have started interacting meaningfully to specify the form and content of the curriculum for various continuing education programmes. Schemes have been drawn up to enable faculty members to spend their sabbatical leave and summer/winter recess in relevant industry. Eminent educationists/academicians are being put on the Boards of Directors of industrial undertakings. Similarly, leaders in industry are serving on the academic and executive bodies of universities. Industries are increasingly utilising the resources and expertise available with the universities.

(Continued on page 12)

27 JUN 1984
C.F.T.R.I., MYSOR

Performances (Men) in Inter University Tournaments of the Year—1982-83

Karan Singh*

Introduction

Lack of sufficient scientific adaptation in the discipline of games and sports, in the space, age, clearly indicates one reason for poor performance by our sportsmen specially at the Varsity level. There are hardly any literature and studies carried out on the current performances of the universities leading to no feedback. Hence, to overcome these drawbacks and hurdles this study has been taken up to grade and properly judge all the performances and at the same time, highlight the position of various universities at the Inter-University, Zonal and State levels.

Purpose and Significance

This is a comparative study undertaken by the Department of Physical Education, Banaras Hindu University for the third consecutive year. Through this study we aim at the following :

1. To throw light and supply feed-back information of the present performances of the universities at the Inter-University level;
2. To find popularity of games/sports regionwise at university level;
3. To let the sports administrators at all levels—university, state sports council and the nation as a whole to know the plus as well as the minus points regarding games/sports, so that they could if they so desire, take the appropriate remedial measures.

Procedure

1. This study is based on the Inter-University Tournaments Results of the year 1982-83 as circulated by the Association of Indian Universities Sports Division.

2. Out of the one hundred and twenty universities which are members of the Association of Indian Universities Sports Division fifty-four universities figure in this study by virtue of points scored by them.

3. Tournaments in twenty-three games and sports were organised in the men's section and these have been considered for the study. The games/sports are ; Athletics, Ball Badminton, Basketball, Boxing, Chess, Cricket, Diving, Football, Gymnastics, Handball, Hockey, Kabaddi, Kho-Kho, Malkham, Rowing, Squash Rackets, Swimming, Table Tennis, Tennis, Volleyball, Water Polo, Weight Lifting and Best Physique and Wrestling.

Note : As Badminton tournament was not held in the East Zone and the report of the South Zone was not received at the time of study it was decided not to include it and avoid bias.

4. The tournaments conducted by the Sports Division of the A.I.U. are of two categories. In the first category are the sports and games played on All India basis where the participating universities teams assemble at one venue and compete. They are ; (i) Athletics, (ii) Ball Badminton, (iii) Boxing, (iv) Chess, (v) Diving, (vi) Gymnastics, (vii) Handball, (viii) Kho-Kho, (ix) Malkhamb, (x) Rowing, (xi) Squash Rackets, (xii) Swimming, (xiii) Water Polo, (xiv) Weight Lifting and Best Physique and (xv) Wrestling. In the second category are games that are first played at different zonal centres and then their winners and runnersup teams of each zone participate in Inter-Zonal tournaments. These games are : (i) Basketball, (ii) Cricket, (iii) Football, (iv) Hockey, (v) Kabaddi, (vi) Table Tennis, (vii) Tennis and (viii) Volleyball.

5. To evaluate the performances it was decided to grade each university by assigning points according to positions secured in Inter-University Tournaments. The criterias decided for the award of points are mentioned below:

(a) Positions obtained in All-India Tournaments : First place 8 points, second place 6 points, third place 4 points and fourth place 2 points.

(b) Positions obtained in Zonal Tournaments: First place 4 points, second place 3 points, third place 2 points and fourth place 1 point.

(c) Positions obtained in Inter-Zonal Tournaments, First place 4 points, second place 3 points, third place 2 points and fourth place 1 point.

6. To make the over-all position clear a chart mentioning games and sports performances by universities in the Inter-University Tournaments organised during the academic session 1982-83 has been prepared and included in this study (see pages 100 & 101). In this chart all the games and sports of which tournaments were organised have been listed. Along with these games/sports, also listed are the universities which secured first, second, third and fourth positions and against the names of the universities points are assigned according to the points criterias mentioned earlier. Its these points which have been used in this study for purposes of various comparative deductions.

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Results

1. Out of the one hundred and twenty universities which are members of the A.I.U. (Sports Division) fifty-four universities figure in this study by virtue of points scored by them. 15 universities belong to the North Zone, 14 universities belong to the West Zone, 13 universities are of the South Zone and 12 universities belong to the East Zone.

2. Ranking of Universities

Rank	University	Points	Zone
1	Guru Nanak Dev	49	N
2	Kerala	40	S
3	Madras	35	S
4	Delhi	34	N
5	Bombay	30	W
6	Poona	30	W
7	Panjab	26.7	N
8	Ranchi	25	E
9	Nagpur	20	S
10	Kurukshetra	16	N
11	Andhra	15	S
12	Banaras Hindu	15	E
13	Maharshi Dayanand	15	N
14	Osmania	15	S
15	Haryana Agri.	14	N
16	Patna	14	E
17	Punjabi	13.7	N
18	Burdwan	13	E
19	Bangalore	12	S
20	Calicut	12	S
21	Shivaji	11	W
22	Allahabad	10	N
23	Vikram	10	W
24	Bharathidasan	8	S
27	Calcutta	8	E
25	Gauhati	8	E
26	Indore	8	W
28	Bharathiar	7	S
29	Jiwaji	7	W
30	Mysore	7	S
31	BITS, Pilani	6	N
32	Rajasthan	6	N
33	Himachal Pradesh	5.7	N
34	Annamalai	5	S
35	I.I.T., Delhi	5	N
36	Rohilkhand	5	N
37	South Gujarat	5	W
38	Utkal	5	E
39	Anna	4	S
40	Ravishankar	4	E
41	Udaipur	4	W
42	Jadavpur	3	E
43	Jodhpur	3	W
44	L. N. Mishra	3	E
45	Punjab Agri.	3	N
46	Aligarh	2	N
47	Gujarat	2	W
48	I.I.T., Madras	2	S
49	Marathwada	2	W
50	M.S. Baroda	2	W
51	Sambalpur	2	E
52	Sri Venkateswara	2	S
53	A.P.S. Rewa	1	E
54	Jabalpur	1	W

Guru Nanak Dev University deserves hearty congratulations for securing the top position in these studies for the third successive year. Other universities who have figured in the top ten list also deserve congratulations. They are; Kerala, Madras, Delhi, Bombay, Poona, Panjab, Ranchi, Nagpur and Kurukshetra. In the top ten list four universities are of the North Zone, three are of the South Zone, two from the West Zone and only one university of the East Zone.

3. Ranking of Zones

The universities that are the members of the Sports Division of the A.I.U. have been divided into four zones: North, East, West and South. This division is based roughly on the geographical location of the universities. The zonal strength and superiority has also been determined by adding together the points scored by the universities belonging to the respective zones.

4. Details of the Universities scoring points zone wise

North Zone: Guru Nanak Dev (49), Delhi (34), Panjab (26.7), Kurukshetra (16), Maharshi Dayanand (15), Haryana Agri. (14) Punjabi (13.7), Allahabad (10), B.I.T.S., Pilani (6), Rajasthan (6), Himachal Pradesh (5.7), I.I.T., Delhi (5), Rohilkhand (5), Punjab Agri. (3) and Aligarh (2).

East Zone: Ranchi (25), Banaras Hindu (15), Patna (14), Burdwan (13), Calcutta (8), Gauhati (8), Utkal (5), Ravishankar (4), Jadavpur (3), L.N. Mishra (3), Sambalpur (2) and A.P.S. Rewa (1).

West Zone: Bombay (30), Poona (30), Shivaji (11), Vikram (10), Indore (8), Jiwaji (7), South Gajarat (5), Udaipur (4), Jodhpur (3), Gujarat (2), Marathwada (2), M. S. Baroda (2) and Jabalpur (1).

South Zone: Kerala (40), Madras (35), Nagpur (20), Andhra (15), Osmania (15), Bangalore (12), Calicut (12), Bharathidasan (8) Bharathiar (7), Mysore (7), Annamalai (5), Anna (4), I.I.T., Madras (2), Sri Venkateswara (2).

5. Ranking of States

Fifty-four universities appear in this study belonging to seventeen states of India. Ranking of the states has been determined by the number of points scored by the universities of state. While mentioning the rank and points scored, the number of universities that actually scored these points and made the tallies for their respective states have also been mentioned. The number of universities is given in parenthesis immediately after the points scored.

Rank	State	Point	Universities
1	Maharashtra	93	(5)
2.	Panjab	92.4	(4)
3.	Tamil Nadu	61	(6)
4.	Kerala	52	(2)
5.	Haryana	45	(3)
6.	Bihar	42	(2)
7.	Delhi	39	(2)

8.	Uttar Pradesh	32	(3)
9.	Andhra	32	(3)
10.	Madhya Pradesh	32	(6)
11.	West Bengal	24	(3)
12.	Karnatak	19	(2)
13.	Rajasthan	19	(4)
14.	Gujarat	9	(3)
15.	Assam	8	(1)
16.	Orissa	7	(2)
17.	Himachal Pradesh	5.7	(1)

5. Ranking of Universities of Different States upto Third place only

State	*First*	*Pts.*	*Second*	*Pts.*	*Third*	*Pts.*
Andhra	Andhra Osmania	15 15			Sri Venkateswara	2
Assam	Gauhati	8	—		—	
Bihar	Ranchi	25	Patna	14	L.N. Mishra	3
Delhi	Delhi	34	IIT, Delhi	5	—	
Gujarat	S.Gujarat	5	Gujarat Baroda	2 2		
Haryana	Kurukshetra	16	M. D. Rohtak	15	Haryana Agri.	14
Himachal	Himachal	5.7	—		—	
Karnatak	Bangalore	12	Mysore	7	—	
Kerala	Kerala	40	Calicut	12	—	
M.P.	Vikram	10	Indore	8	Jiwaji	7
Maharashtra	Bombay Poona	30 30			Nagpur	20
Orissa	Utkal	5	Sambalpur	2	—	
Panjab	GNDU	49	Panjab	26.7	Punjabi	13.7
Rajasthan	Pilani Rajasthan	6 6	—		Udaipur	4
Tamil Nadu	Madras	35	Bharathidasan	8	Bharathiar	7
U.P.	BHU	15	Allahabad	10	Rohilkhand	5
West Bengal	Burdwan	13	Calcutta	8	Jadavpur	3

6. First positions shared by universities in games and sports tournaments

Allahabad	N	Tennis
B.H.U.	E	Basketball
Bombay	W	Water Polo
Calcutta	E	Rowing
Delhi	N	Cricket, Squash Rackets
G.N.D.U.	N	Boxing, Gymnastics, Kabaddi and Weight Lifting
Haryana Agri.	N	Boxing
Kerala	S	Athletics, Swimming, Table Tennis & Volleyball
Madras	S	Ball Badminton and Chess
Maharshi D.	N	Boxing and Wrestling
Osmania	S	Handball
Poona	W	Kho-Kho and Malkhamb
Ranchi	E	Football and Hockey
Vikram	W	Diving

Fourteen universities have shared first positions in twenty-three disciplines. Out of these, five universities of the North Zone have won first positions in eight disciplines, three universities of the East Zone have won first positions in four disciplines, three universities of the West Zone have also won first positions in four disciplines and three universities of the South Zone have won first positions in seven disciplines.

Recommendations

1. The factual data that has emerged from this study under six headings is of utmost importance. From this data many significant conclusions can be derived which will go a long way in improving the standards of games and sports in the universities. It is therefore suggested that agencies responsible for games and sports promotion at the university level, such as university sports boards, state sports councils, Sports Division of the A.I.U., U.G.C., Ministry of Education, Govt. of India, Ministry of Sports, Govt. of India should undertake more in-depth studies.

2. Reason for the poor performances should be investigated by respective universities and State Sports Councils.

3. It is recommended that the newly created Ministry of Sports at the Centre should play pivotal role and undertake surveys and studies concerning facilities, coaching programmes, funds for sports promotion, incentives to the players, administrative set-up of sports departments etc. etc. ☐

Convocation

Prof. Menon Addresses Convocation of Delhi University

Text of the convocation address delivered by Prof. M.G.K. Menon, Member, Planning Commission at the University of Delhi on March 24, 1984. This was the 61st Convocation of the University.

"My recollections of the University of Delhi go back to the summer of 1946. I had taken my Bachelor's Degree in Science of the Agra University, having studied in a relatively unknown College in Rajasthan—Jaswant College, Jodhpur. There were no research facilities there; even the teaching facilities were very inadequate. But this was more than compensated by the spirit of togetherness that enveloped the students and teachers; there was fun and pleasure in the whole process of learning. To me it is sad that so many go through the educational system without feeling the joys of learning and understanding. My interest lay in science, largely through the influence of several teachers. They were not great scientists. But they gave me a feeling of curiosity, excitement, challenge and pleasure in science; a large part of our educational system is so over-burdened with routine that there is no scope for these aspects to figure in the life of the student. I believe in the importance of the *Guru-Shishya* relationship between teacher and student; and shall have more to say about this a little later in this address.

"An opportunity to meet that ever-ebullient, dynamic and brilliant scientist Prof. C.V. Raman settled for me the question of what I should do; I decided to pursue studies in physics. Delhi beckoned me, since I had heard of Prof. D.S. Kothari as one of the greatest active teachers of physics then. Unfortunately, I could not get admission to study under him. The student community today is familiar with the problems of admissions where one has to belong to a particular institution, State, linguistic or other group for getting admission for a particular course or to work under a chosen teacher. It is not enough to be an Indian and to be good in one's field.

"Having failed to get admission for the Master's Degree in Physics at this, and at the Allahabad University, I joined the Law classes of this University! But Mr. Chancellor, you were not teaching here, and Roman Law did not excite me. I played truant from my Law classes and went to Bombay, where I managed to get admission at the Institute of Science under Prof. N.R. Tawde.

"Ten years ago, on the occasion of the Golden Jubilee of the University, I was honoured by the conferment of a Degree of Doctor of Science (honoris causa); thus becoming a part of this University. I, therefore, address you today as one of you.

"I would like to begin by conveying my warmest congratulations and very best wishes to all of you, who have taken their various degrees at this convocation. And to you Mr. Chancellor and Mr. Vice-Chancellor, I am deeply grateful for the honour you have done me in asking me to address this convocation. I shall now devote the rest of this address to aspects relating to higher education in India; the objectives, challenges and opportunities.

Higher Education—Objectives, Challenges and Opportunities

"We are now drawing towards the end of the Sixth Five-Year Plan; in a few days, from 1st April, the last year of this Plan will commence. Preparations are under way for working out priorities and programmes for the Seventh Five-Year Plan, which will commence on 1-4-1985. For the sector of Education, a large number of working groups have been set up covering:

(i) Elementary Education; (ii) Secondary Education; (iii) University Education; (iv) Adult Education; (v) Technical Education; (vi) Languages; (vii) Educational Technology & Distance Learning; (viii) Monitoring and Evaluation; (ix) Art and Culture; (x) Resources required for Education Sector; (xi) Sports, Physical Education and Youth Services; (xii) Library Services and Informatics.

"There is also a Steering Group on Education, to examine the reports of the above working groups and to define inter-se priorities, linkages, an overall coordinated perspective, possible new approach to this sector and financial resources that will be needed. Aspects of education in relation to employment and manpower needs are also being dealt with separately.

"It is not for me to pre-judge what these Groups will recommend, for they have yet to finalise and submit their reports. On this occasion I thought, however, that I would share with you some of my personal views concerning the objectives, challenges and opportunities in the field of *higher education*.

"The enrolment in higher education grew from 7,000 in 1879-80 to just over one lakh in 1947-48. The base was low and so the total percentage growth over the first 30 years (1879-80 to 1909-10) was high (400%); but was only 80% over the next 30 years upto Independence. Since

Independence, there has been a significant growth in university enrolment: from 0.1 million in 1947-48 to 0.3 million in 1955-56 and 3 million in 1981-82. The enrolment in higher education in 1981-82 corresponds to 4,400 per million of population, compared to 300 per million of population in 1947. There has thus been a fifteen-fold increase per capita in opportunities for higher education. Considering that this has been achieved over a period when the population has essentially doubled, one can see the magnitude of expansion. Over the 15 years, from 1955-56 to 1970-71 there was an *annual* growth rate of about 13.5 per cent. In the decade thereafter the growth rate came down to 4 per cent. Thus, up to the end of the sixties there was a massive expansion, and over the next 10 years a phase of consolidation.

"In the pre-Independence period, half the enrolment, (15 out of an enrolment figure of 30 per lakh of population in 1947), was in the area of liberal education at the level of B.A. and B.Sc. The numbers in agriculture, forestry, medicine, engineering and technology, veterinary science, commerce, etc., were very low. But these are the areas of importance for developmental activities. During that period higher education also remained concentrated at a few major centres. Naturally, there were considerable inequalities and disparities between the upper elite strata of society and the under-privileged lower strata, as also between urban and rural areas, and between boys and girls.

"We have come a long way since Independence in providing opportunities for higher education to much larger numbers throughout the length and breadth of our country, and particularly in the vast rural hinterland. In spite of this, there is a general feeling that higher education in India is passing through a crisis.

"This has arisen partly because the initial rapid expansion in the post-Independence period has been much faster than the rate of growth of the economy. The growth of education was not planned in relation to available resources, nor in relation to manpower needs in different sectors, resulting in lowering of the average quality of the output and rapidly increasing the numbers of educated unemployed. There has also been a crisis of identity concerning the role of the university in the conditions encountered in a developing economy undergoing rapid changes.

"Historically, the university system was meant for the academic training of a relatively small number of students. Education was essentially to be through interaction amongst the students and with the teachers. This education was meant to be broad-based, and not specifically connected with the acquisition of knowledge or of skills needed in vocations or for employment. The university was thus somewhat of an elite institution. It was often referred to as a 'temple of learning'.

"In the Indian context, however, our first universities at Bombay, Calcutta and Madras were large affiliating universities. Thus the Bombay University had under its purview a geographical area covering Sind and Gujarat in the North, to North Canara in the South and upto Nagpur in the East. The Madras University covered an area from Orissa to Kanyakumari on the east coast, and up to Mangalore on the west coast. As time passed, more universities have come up, and such large areas of the country no longer come under the purview of any single university. But we do have enrolment figures of as large as 2.5 lakh students under a single university. Such figures, in my view, are unmanageable from the view point of any sensible objectives that can be laid down for a university.

"It is true that higher education cannot be the prerogative of a few. It is not for the State, or the public or anyone else to cavil at the opportunities sought by young people to fulfil their natural aspirations for higher education. We will continue to face rising numbers and rising expectations. We must search for ways to deal with this.

Implementation of the 10+2+3 System

"A primary step would be to effectively introduce the 10+2+3 system. This reform was first recommended by the Calcutta University Commission. At that time the Matriculation, Intermediate and first degree examinations, apart from post-graduate examinations, were all conducted by the Universities. That Commission felt that the dividing line between the University and Secondary School should be at the Intermediate examination. This recommendation made so great an impression at that time on Indian educational thought that it appeared to be on the verge of universal acceptance. The University Education Commission (1948-49) under the Chairmanship of (later President of India) Dr. S. Radhakrishnan also concluded on the need to adopt the pattern of 10+2+3 on an uniform basis. The Education Commission (1964-66) under the Chairmanship of Prof. D.S. Kothari also came to the conclusion that, on sound academic considerations, it would be highly desirable to adopt a uniform pattern of 10+2+3. The National Integration Committee under the Chairmanship of late Shri S. Sampoornanand recommended this from the viewpoint of national integration. It should be pointed out that it is not purely on the basis of these weighty recommendations of important Commissions and Committees that it is necessary to implement this proposal. Their recommendations are based on important academic considerations and are in the best interests of the country. It is not just a matter of adopting some particular arithmetic to divide up the total number of years in the education process, or of looking at it as a purely structural problem. It is essentially a fundamental educational reform. It is related to the stage and age, on academic grounds, at which a student should enter the university system. It relates to the methods of education which are quite distinct and different in the secondary school and college stages. It promotes vocationalization of secondary education such that students are fitted for the pursuit of a vocation at the end of the secondary stage. Its implementation will result: in smaller numbers, of those better suited for it, flowing into the university system; in a better match between education and employment; in greater job satisfaction for teachers in higher education; and improvement in standards of quality.

"A major step to realize the 10+2+3 system will be a change in recruitment policies for Class I and Class II services of the Central and State Governments (and all corresponding categories in the public sector); for these, recruitment should be at the end of the higher secondary stage rather than at the end of the first degree. This is important if the hope of the higher secondary stage becoming a terminal one is to be realised. There has to be a clear delinking of degrees from jobs in bulk; and relaxation of the requirement of a bachelor's degree for most jobs.

Vocationalization

"The+2 stage in the 10+2+3 should be located in the school system. To begin with, all schools at the+2 stage should have vocational courses related to local needs; on a gradual basis this could be extended to all existing schools. There should be significant stress on socially useful productive work, as well as on vocationalization in the higher secondary system. Vocationalization should be in fields such as agriculture and post-harvest technologies, rural and cottage industries, medicine and public health, crafts, maintenance engineering in various sectors, entrepreneurial development particularly in the services sector etc. Vocational courses should not be regarded as terminal. Whilst they should be of utmost value to a student who goes out into real life at that stage, they would be equally important for those going on for higher education. I might point out here that the first training that Prof. Tawde insisted that I take, on joining for the M.Sc. under him, was in the fields of carpentry, glass blowing and use of workshop machines.

Decentralization: Need for Autonomous Colleges

"The other important reform needed in the field of higher education is that of major decentralization. About 90% of our university students study in affiliated or constituent colleges whose curricula, teaching programmes and examinations are controlled by their respective universities. The Calcutta University Commission (1917-19) stated in its report: "They (i.e. teachers) are deprived of the chance of kindling the interests of their students, and so winning their allegiance, because every inch of the ground they are to cover is marked out for them, and the students, bent simply on the examinations, are apt to resent any departure from examination coaching". This can only be overcome if a reasonably large number of colleges become autonomous, which implies that they take full responsibility, and are fully accountable, for the content and quality of education imparted. Local needs and relevance can be fully taken care of in such a system, including linkages with the community around. The role of the University would be to provide general guidelines and to monitor the programmes in the interest of overall standards. The autonomous colleges would retain flexibility and initiative in the manner of their functioning. The present large, unwieldy and centralized governance structures are too slow moving to effect innovations that alone can make education a live and vital activity, full of dynamism.

"If these measures are implemented and I see nothing radical or infeasible about them, then a significant change will take place in the functioning of the universities. They will no longer be concerned with enormous student bodies and associated problems of management including finance, hostels, examinations, and certification etc. They will then be able to play their role: in teaching and research at post-graduate level; and pushing forward the frontiers of knowledge; in improving the standards of school and college teachers, on whom depends the standard of education in those institutions; in providing guidelines and advice to ensure overall standards of autonomous colleges; and in becoming centres of excellence from which leadership will emerge. With these objectives and functions, the present crisis of identity which confronts the Universities will be resolved. In general, what is proposed is a system of decentralization, which is essential for the management of any large system such as the educational system of a country of subcontinental dimensions with associated diversity in backgrounds, needs and aspirations.

"The universities must also encourage lateral entry into the university system, at all stages of life, for those in service, in professions, in industry, in other facets of education system etc. They will thus keep themselves involved in real problems rather than purely academic and theoretical situation; and in reverse, they would transfer academic excellence to institutions in the field.

Financial Resources for Education

"It is my personal view that the financial resources allocated for education have been woefully inadequate so far. This has principally been because there has been a tendency to look upon such allocations as expenditure rather than as investments. There has also been the feeling that, with the present system, one was not getting returns for the investments made; rather one was increasing the extent of educated unemployed. In this context, some have expressed the view that it is necessary to reduce the allocations for higher education, in order to make more resources available for elementary education, where we are faced with the major problem of fulfilling our promises in the Constitution, of providing universal elementary education, as well as for adult education, since we face such a formidable magnitude of illiteracy; I might remind you here that 65% of the country is still illiterate.

"A few facts are worth stating in this connection. The expenditure per pupil goes up rapidly as we move from primary to middle, secondary, college and upto university education. At current prices, there has been a significant increase in expenditure over the past thirty years under all these categories; but at constant (1970-71) prices, there was an increase in the case of primary, middle and secondary schooling upto 1970-71 and then a small decrease; whereas in the case of higher education there was an increase upto the mid-sixties and since then a decrease. The money received from the students is small compared to the outlay per pupil in the higher education sector, which is therefore very heavily subsidized.

"My contention is that the investment on education needs to be increased at all levels, including on higher education, and the system changed in the manner I have described earlier to make it more relevant from the viewpoint of the individual, of employment and of national needs. If this is done, these allocations can constitute investments in human capital development. I trust this will come about in the Seventh Plan.

Education and Employment

"One of the first concerns in the minds of students relates to employment. This is only natural, particularly in the circumstances that obtain in the country. Education is seen as a means to improve the opportunities for securing and, hopefully satisfying employment. But these hopes are being belied by the increasing number of educated unemployed, including those who have gone through the higher education system. It is, therefore, extremely important to ensure a proper match between the educational system on the one hand and employment opportunities on the other. And I hope that some success will be achieved in this regard in the formulation of the Seventh Plan. The measures that I have suggested in the earlier part of this address should help in this direction.

"But I would like to caution that, for those in the university system, if the question of employment assumes over-riding importance in their minds, then aspects relating to learning and true education suffer; and these are the assets of ultimate real value to the individual, including gainful and satisfying employment. Earning is only one of the end-products of the education system; but this is not the entire objective of education. The principal purpose of education is to develop the complete human personality, and to enable the individual to live in harmony with the environment into which he or she emerges. This is an environment which is in a state of significant flux and change, particularly because of the breath-taking pace at which science and technology have been moving forward with rapid advances in communications, transportation, medicine, new capabilities through electronics and space technologies, technological changes in industry, the threat of a nuclear holocaust and much else. Therefore, the individual must have a sufficient degree of adaptability, motivation and dedication to be able to continue the process of learning rather than just depend on a certain amount of knowledge acquired in the few years of the formal educational process.

Higher Education and the Growth of Excellence

"Education has clearly many facets, such as: the acquisition and storage of a certain amount of information or knowledge which would act as a base for further progress—the alphabet, a certain basic vocabulary, the handling of numbers, would fall in this category, at the minimal level; there is then the need to acquire certain skills and techniques; but principally, education should have the objective of sharpening that most wonderful human capability, the brain, to a keen cutting edge. This latter aspect of education is important at all levels, from elementary education to the most advanced levels. We are, however, aware that a large part of education, as practised, involves handing over of knowledge as a dead inanimate object; stress is on learning by rote. The pressure of the examination system, and the need to perform well in these, further restricts the entire exercise to aspects likely to figure in question papers and are contained in guide books. The intrinsic curiosity and sense of wonder that we see in all children is destroyed in the process, and with it the spirit of penetrating and independent enquiry. The stress is on memory rather than reasoning. Apart from the very basic aspects of universal elementary education, and of literacy, we must have as Swami Vivekananda has said: "Life-building, man-making, character-making education." We must bring out to the fullest the abilities that are latent in each individual. This cannot be achieved through what are only educational factories turning out standardised products.

"For a truly meaningful education, there have to be organic links between teachers and students and amongst the students. This is true at all levels of education. I would like to spend a few minutes on these organic relationships in the realm of higher education.

"We have had in India the *Guru-Shishya parampara*. Particularly in the performing arts, we can trace the great *Gharanas* of our country; there have also been the Schools of painting and in literature. In our country, as well as abroad, one can trace great accomplishments and individuals to great schools and great teachers, and establish a geneology based on teacher-student links; and this is certainly true for science. I had covered this aspect in the Presidential Address

I gave at the Indian Science Congress session in Mysore in January 1982.

"There are many who argue that the *Guru-Shishya* relationship implies unquestioning obedience, which stunts the process of enquiry so essential for science, or for that matter any innovative or creative activity. I do not believe this to be the case. Certainly a great teacher will impose discipline, in order to ensure hard work, and to prevent short-cuts, or superficial approaches and departures from sound techniques. With regard to hard work, we might recall the great chemist Liebig, who told his student Kekule, who later became famous for his contributions to the structure of organic compounds, specially the ring structure of benzene: "If you wish to be a Chemist, you must be willing to work so hard as to ruin your health". This was to emphasize the importance of hard work as a prime element in science. It is attitude rather than knowledge which is conveyed by a distinguished teacher. An important element of attitude that a great teacher imparts is that of humility, and from it flows a self-critical mind and the continuous effort to learn and to improve. The great periods of Hindu philosophy have been characterised by questions and counter-questions, by debates of the highest order, rather than acceptance of hierarchy or of authority.

"In concluding, I would like to wish my young friends the very best in your lives—of happiness, health and creative work in the interests of human society and the nation; and would commend to you the words of the Buddha who had remarked:

> "Believe nothing
> merely because you have been told it
> or because it is traditional
> or because you yourself have imagined it
>
> Do not believe what your teacher tells you,
> merely out of respect for the teacher
>
> But whatever after due examination and analysis
> you find to be conducive to the good, the benefit,
> the welfare of all beings,
> that doctrine believe and cling to,
> and take it as your guide." □

Continuing Education of Engineers in Developing Countries Like India

(Continued from page 4)

Although the above trends are encouraging there is a lot more to be done to promote the continuing and further education of engineers in developing countries. All those concerned with and involved in industry should review their activities to ensure that they perceive and present continuing education as a matter of vital concern. Employing organisations should review their salary and career structures for engineers to ensure that they adequately reflect a value for continuing education. Post-graduate degrees and diplomas should be prescribed as the minimum qualification for recruitment to relevant positions in the engineering profession. All developmental projects and industrial expansion should be linked with the induction of competent post-graduate engineers and technologists into the establishment. Quality Improvement Programmes (QIP) should be introduced for working engineers in industry on the pattern of the QIP schemes for teachers in universities.

To conclude, it is only by updating engineers through continuing and further education programmes that it will be possible to keep abreast of the fast changing scientific and technological developments. Continuing education of engineers in fast developing countries like India have also to take care of questions of relevance, technology transfer and appropriate technology. In spite of their limited technological infrastructure and other constraints, challenges for sustaining continuing education are being acknowledged and responded to by the developing countries very positively. Real changes are taking place in the training and professional updating of engineers and technologists as old patterns, responses and frontiers dissolve.

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Summer Course in Applied Linguistics

A summer course in Applied Linguistics for language teachers of the Gujarat Vidyapith and other gram Vidyapiths in Gujarat was conducted under the joint auspices of the Central Institute of Indian Languages and Gujarat Vidyapith at Ahmedabad from 10th May 1984 to 25th May 1984. The summer course was for Gujarati, Hindi, English, Sanskrit and Urdu language teachers. These language teachers had accumulated over the years considerable amount of experience in teaching languages at the Vidyapiths. Most of them were native speakers of the language concerned while the rest had native like or near-native competence in the language concerned. Some of these teachers had been teaching these languages at the high school while others taught these at the collegiate levels including the B.Ed. level. The summer course was, therefore, designed to orient the participants in modern technique of mother tongue and second language. It was also designed to give the teachers some practice in the preparation of language teaching materials relevant to their language teaching situations. It was planned to have two aspects : theoretical and practical. The theoretical background was to be provided in the form of discussions and lectures. The practical aspect was to be covered in the form of collection and analysing the students errors, analysis of the syllabus and textbooks, preparation of teaching materials, analysis of the examination papers and film/television shows for the participants.

Course Objectives

The course aimed at fulfilling the following objectives :

(1) To acquaint the participants with the modern language teaching techniques and with the techniques for assessing language proficiency attained by students; (2) To help the participants locate areas of difficulties in teaching the language concerned; (3) To enable the participants to prepare graded supplementary teaching material as an aid to help their learners; (4) To give the participants some practice in utilising different teaching aids; and (5) To acquaint the participants with the objectives of the syllabus, and textbooks prescribed for different levels.

Plan of work

The programme consisted of 60 hours class-room work and 30 to 45 hours of work outside the class-room. In 12 days, (two Sundays, inauguration and valedictory have not been counted) nearly 41 topics were covered in approximately 60 class-room hours.

Three out of the five objectives could be achieved i.e. (I) to acquaint the participants with the modern language teaching techniques and with the techniques for assessing language proficiency attained by students, (2) to help the participants locate areas of difficulties in teaching the language concerned and (3) to acquaint the participants with the objectives of the syllabus, and textbooks prescribed for different levels. The remaining two objectives i.e. (I) to enable the participants to prepare graded supplementary teaching material as an aid to help their learners and (2) to give the participants some practice in utilising different teaching aids could not be achieved in full, due to shortage of time.

Bombay Varsity institutes Chair in Banking

Bombay University has instituted a Chair in Banking with financial assistance from the Bank of India. The Chair includes a number of component services which will be set up in three stages. In the first stage the chair will be established with supporting staff. The second stage will be to establish research fellowships and the third stage will be to develop a centre of research in commerce in which there will be specialisation in banking, finance and other allied disciplines.

The Chairman of the Bank of India, Mr T. Tiwari, recently presented an endowment cheque to the university.

OU to offer computer training to school teachers

Osmania University will be the Resource Centre for training school teachers and providing support to the computer studies in schools of Andhra Pradesh. During the seventh plan period, nearly two lakh schools will be covered by project class (computer literacy and studies in schools) all over the country. Under the pilot project, 250 schools have been selected country-wide.

According to Prof. D.V.R. Vithal of University Computer Centre, thirty school teachers from the State will be trained for four weeks at Osmania University starting June 18. The training will introduce the teachers to the various applications for which computers can be used. They will be taught computer aided instruction using computer as a pedagogic tool in teaching various subjects. Three resource persons from the University are undergoing orientation course at IIT, Madras, to offer teacher training.

The Resource Centre at the University Computer Centre, Osmania University, will be provided with five micro-computer systems—similar to the ones to be used at the schools. The Computer Maintenance Corporation will look after the upkeep of the computers.

The Department of Electronics, Ministry of Education and Culture, Government of India, and the NCERT are the sponsors of the project.

Grants to BHU for B.Tech. in computer science

The University Grants Commission has released the following grants for the introduction of the B. Tech. Courses in Computer Science and Technology with an annual intake of 30 students at the Institute of Technology of Banaras Hindu University.

Non-Recurring: Equipment for Computer Science & Technology Laboratories Rs. 8.00 lakhs; Library Books, Journals and Computer Manuals etc. Rs. 1.00 lakh.

Recurring (*for 5 years*): Total academic staff of 2 Professors, 2 Readers and 4 Lecturers including the post of 1 Professor, 2 Readers and 2 Lecturers already approved for the Computer Science Department; technical staff of 3 persons; Addition of Library books, Journals and Software Applications, Rs. 0.30 lakhs p.a. Working Expenses Rs. 0.30 lakh p.a. in first 2 years and Rs. 0.60 lakhs p.a. thereafter.

A.P. Govt. sanctions grants to two universities

The State Government has sanctioned Rs. 25 lakhs as grant to Sri Padmavathi Mahila Viswavidyalayam, Tirupati for meeting expenditure of the university for 1984-85. The amount is payble in four quarters at the rate of Rs. 6.25 lakhs per quarter.

The Government has also sanctioned Rs. 50 lakhs as grant to Andhra Pradesh Open University for meeting expenditure of the University for the year 1984-85. The grant is payable to University in four quarters at the rate of Rs. 12.50 lakhs per quarter.

Sports complex soon at Patna Varsity

The Patna university will soon have a sports Complex at an estimated cost of Rs. 50 lakhs. This was announced by the Vice-Chancellor of the University, Dr. G P. Sinha recently. It is reported that the State Government had sanctioned the necessary grants to the university for the construction of the sports complex.

The proposed complex would comprise an auditorium of 40,000 Sq ft for indoor games. There would be separate courts for badminton, tennis, basketball, volleyball etc in the auditorium.

The National Institute of Sports, Patiala has already accepted a proposal of the Patna University for creation of a sports centre.

OU new course in personnel management

Osmania University is introducing an evening part time two-year Post-Graduate Diploma in Public Personnel Management from the academic year 1984-85 for inservice candidates. The course will be conducted between 6 and 9 p.m.

Social Science Documentation Centre

The Social Science Documentation Centre of Indian Council of Social Science Research, New Delhi provides the following facilities:

- compilation of short/selected bibliographies tailored to the need of scholars;
- for study on all days of the year except three holidays (i.e., 26 January, 15 August & 2nd October) in the premises of SSDC; publications not available in the library are collected from other libraries on inter-library loan basis;
- supply of photocopies of articles/documents of interest from out of a rich collection of back and current issues of journals/serials as well as unpublished theses and research reports, subject to the provision of the Copyright Act;
- for cyclostyling/rotating/electric scanning;
- financial assistance under Study Grant scheme for visiting libraries for collection of material for research.

Two new departments at BHU

Two new departments, that of Statistics and Biochemistry, have been added to the Faculty of Science of the Banaras Hindu University recently.

Prior to the creation of the Department of Statistics, it was a section of the Department of Mathematics. The teaching of statistics began at BHU in 1950. Initially it was at the undergraduate and diploma levels.

This Department besides teaching courses for the undergraduates in Arts and Science also conducts a two-year pass course in Applied Statistics. With a view to providing them practical knowledge, students are required to complete project works during the final year. For this purpose data is collected by them from the field and processed in the data processing unit of the Centre of Population Studies which is attached with the department.

Provision for MSc Course in Biochemistry was made in BHU since 1966. Many departments participate in the programme. The thrust area of research has been the mechanism of action and regulation of several enzymes. In the department studies have been carried on the biochemistry of stress disorders, nutrition, entero toxins of dysentry causing microorganisms and the mechanism of action of the Ayurvedic drug "guggulu" in collaboration with other departments.

Two more courses for DU Colleges

It is reported that the Academic Council of the Delhi University at its recent meeting approved introduction of two more courses at the undergraduate level as part of the scheme of restructuring of courses. The two new courses are Office Management and Secretarial Practice and Insurance.

These courses are in addition to the 14 new courses approved earlier (Reported in University News of June 8, 1984).

Nagarjuna University jurisdiction extended

It is reported that the Andhra Pradesh Cabinet has decided to extend the area of jurisdiction of Nagarjuna University from the present limit of 20 kms to Prakasam, Guntur and Krishna districts. It was also decided to convey the approval of the Government to affiliate all government colleges which were within these three districts to Nagarjuna University.

Proposal for engineering college at Himachal Pradesh cleared

The Chief Minister of Himachal Pradesh revealed that the Planning Commission had cleared a proposal for setting up an Engineering College in Himachal Pradesh.

Tamil University workshop on Computer Applications in Libraries

The Tamil University, Thanjavur, recently organized a workshop on "Computer Applications in Libraries in Tamil Nadu".

Inaugurating the workshop, the Vice-Chancellor of the university, Dr. V.I. Subramanian, said that the Tamil University Library, in collaboration with the computer and data processing centre of the university, had developed two computer software packages. These were Tamil SDI (Selective Dissemination of Information) and Tamil Marc (Machine Readable Catalogue) to store in a Micro Processor the latest information about articles in periodicals and books on any subject.

The software also helps in retrieving effectively information through a visual display terminal or be printed out in a datamatrix printer.

It was also stated that the two software packages would help remove the language barrier that stood in the way of researchers in Tamil who work only in Tamil and whose research work are not exposed to international researchers.

Gurukula Kangri Vishwavidyalaya

Professors' Quarters worth of Rs. 20 lacs are under speady construction in the Gurukula Kangri Vishwavidyalaya. Another set of quarters for non-teaching staff at a cost of Rs. 5 lacs has also been sanctioned by the University Grants Commission and steps are being taken by the University for their construction. Work of the repairs of the other buildings such as guest house and University Hall is also being speeded up.

The NCC camps of Junior Division Cadets of NCC Directorate, Delhi are being conducted at Gurukula Kangri University. The first batch of 500 cadets arrived on 5th June 84 to camp for ten days. The second batch of same number is scheduled to arrive on 16 June 84. This batch of cadets will also camp for ten days.

During the camp, the NCC cadets are given extensive physical training, drill training and weapon training which culminates into actual firing by cadets. This inculcates in them self-confidence, discipline and mental robustness. Apart from above training the cadets are also made to visit historical places. The cadets also did social service by planting trees and cleaning of roads and university campus area. The opening of camp was inaugurated by the Vice-Chancellor of Gurukula Kangri University, Shri G.B.K. Hooja.

News from Agril. Varsities

Lab to Land Programme in Madhya Pradesh

In Madhya Pradesh, where 32.5 per cent of the total operated holding is cultivated by small farmers and 18 per cent is controlled and managed by marginal farmers, Jawaharlal Nehru Krishi Vishwavidyalaya has been entrusted the major responsibility of implementing the Lab-to-Land programme. The Indian Council of Agricultural Research has increased the number of farm families from 3300 to 4500 in the second phase of the programme. The JNKVV has been implementing the programme through its 22 sub technology-transfer centres located on its various campuses and research stations situated in different agro-climatic regions of the state.

In future about 1 lakh of small and marginal farmers would be adopted by different transfer technology centres in the country.

Highlighting significant achievements of the programme to participants attending a meeting of Lab-to-Land Programme held recently at the Directorate of Extension, JNKVV, Dr. D.K. Sharma, Director of Extension Services, JNKVV informed that on an average there was substantial increase in the foodgrain production following adoption of modern practices by the farmers. A farmer of Balaghat could harvest a record production of 6800 kg/ha from demonstration conducted on crop production technology of paddy variety 'Kranti'. Similarly, demonstrations conducted on crop production technologies of Jowar variety CSH-5, Maize variety Ganga and Bajra variety BJ-104 gave highest yield i.e. 39.14 q/ha in Indore, 48.00 q/ha in Chhindwara, and 20.00 q/ha in Morena districts respectively.

Dr. Sharma felt that after adopting farmers for two years, follow up action was important to maintain the continuation of adoption of technology among the participating as well as non-participating farm families.

News from Abroad

New laser laboratory at University of Sydney

A new research laboratory which probes molecular movements by using pulses of laser lasting for only one tenth of a picosecond (one tenth of a millionth of a millionth of a second) has been established in the University of Sydney's School of Chemistry.

Financed by the Australian Research Grants Scheme and by university research grants for major equipment, the new laboratory is one of the four most advanced picosecond laser spectroscopy facilities in the world. It is expected to be used widely by scientists throughout Australia.

Dr Mark Sceats, lecturer in physical chemistry who has been in charge of setting up the laboratory, said its versatility was enhanced by its proximity to a completely rebuilt Laser Raman system. Together the two systems formed a powerful laser laboratory.

Dr Sceats said the laboratory was vital to the future of chemical research in Australia. It would allow access to the extremely short picosecond time scale at which much of basic molecular motions occurred during chemical reactions.

Research into mine safety

Greater safety and more efficiency in the coal industry is the aim of Australian Government-funded research into methane gas drainage from mines.

Gas drainage is a technique by which gas is extracted from the coal seam and taken to the surface. This reduces the risk of outbursts of gas and coal at the workface and the possibility of explosions and fires. It markedly reduces the problems of ventilation and improves safety and productivity.

Since 1978 almost $5 million has been spent on research into gas drainage and related activities.

The project has proved extremely effective in reducing the methane concentration in the mine working area and reducing the risk of outbursts. As a result more coal can be won. Recovery has been increased and operating costs have been reduced.

Subject to market availability the mine, West Cliff Colliery in New South Wales, is now able to mine in a year up to one million tonnes more of high-quality export coking coal.

A pilot plant has been installed to use the vented methane to generate electricity.

The project by the Coal Cliff Collieries Proprietary Limited, was supported by funds provided under the National Energy Research Development and Demonstration Programme.

Khaja Education Society's

KHAJA BANDA NAWAZ COLLEGE OF ENGINEERING
GULBARGA-4
(ESTD. 1980)

No. KES/KBNEC/APT/1984-85

WANTED

Applications are invited from the qualified candidates in the following disciplines as detailed below :

1. PROFESSORS IN MECH. ENGG.	Ph.D., OR M.E./M.Tech. with 10 years experience	(2)
2. PROFESSORS IN ELECTRONICS AND COMMUNICATION ENGG.		(2)
3. PROFESSORS IN INSTRUMENTATION ENGG.		(2)
4. ASSTT. PROF. IN CIVIL ENGG.	M.E./M.Tech. with 5 years	(2)
5. ASSTT. PROF. OF MECH. ENGG.		(3)
6. ASSTT. PROF. IN ELECTRONICS & COMMUNICATION ENGG.		(2)
7. LECTURERS IN CIVIL ENGG.	M.E./M.Tech. or B.E./B.Tech. (1st Class)	(6)
8. LECTURERS IN MECH. ENGG.		(6)
9. LECTURERS IN ELECTRONICS & COMMUNICATION ENGG.		(3)
10. LECTURERS IN INSTRUMENTATION ENGG.		(3)

Salary and allowances will be paid as per Govt. of Karnataka Pay-Scales OR AICTE Pay Scales. Higher start may be considered depending upon qualification and experience.

Retired teachers may also apply. TO & FRO IInd class fare would be paid to the selected candidates at the time of joining the duty. Last date for the submission of application is **30.6.1984.**

PROF. M.A.K. KAZIMI
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Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Issac, P. *Combinatories.* U Ker, Trivandrum. Dr. Muhammed Ismail Jinnah.

2. John, Johny K. *Theory of semigroup.* U Ker, Trivandrum. Dr. A.R. Rajan.

3. Kannan, B. *Combinatories.* U Ker, Trivandrum. Dr. Muhammed Ismail Jinnah.

4. Kripalini, K.S. *Algebraic theory of semi-group.* U Ker, Trivandrum. Dr. R. Veeramony.

5. Raju, K.O. *Modern Algebra.* U Ker, Trivandrum. Dr. K.S. Subramonian Namboodiripad.

6. Vijayan, K. *Theory of semigroup.* U Ker, Trivandrum. Dr. A.R. Rajan.

7. Vijayasree Amma, P. *Algebraic theory of semigroup.* U Ker, Trivandrum. Dr. R Veeramony.

Physics

1. Bhindwale, Shashikant P. *Study of the innovative roles of the diffraction gratings.* Devi Ahilya, Indore. Dr. R.S. Kasana.

2. Ghatpande, Shashikant G. *A study of the stearing interferometry and its innovative features.* Devi Ahilya, Indore. Dr. R.S. Kasana.

3. Roos, Abdul Javad Novin. *Development and study of solar cells.* Devi Ahilya, Indore. Dr. R.K. Pandey.

4. Sutrawe, Dhondukant Vithalrao. *Some luminescence studies of alkaline earth sulphide phosphors.* Shivaji U, Kolhapur. Dr. C.S. Shalgaonkar.

Chemistry

1. Singh, Sheo Raj. *Coordination Chemistry.* U Delhi.

Engineering & Technology

1. Chandola, A.K. *Application of fracture mechanics in developing standards for non-destructive testing inspection.* BHU, Varanasi. Dr. K.K. Das Talukder.

2. Rastogi, Pardeep. *Squeeze film lubrication of joints.* BHU, Varanasi. Dr. M.K. Ghosh.

3. Sarkar, Prabir Kumar. *Study state and dynamic behaviour of hydrodynamic thrust bearings with incomplete film.* BHU, Varanasi. Dr. M.K. Ghosh.

BIOLOGICAL SCIENCES

Zoology

1. Bedhankar, M.G. *Optimisation of bio-gas production from water hyacinth under controlled environmental conditions.* Shivaji U, Kolhapur, Dr. (Mrs.) Usha Hardas.

2. Bharaj, Gulzar Singh. *Succession of pest complex and biological studies of some insects and their incidental preference to different varieties of sorghum (Sorghum bicolar)* Devi Ahilya, Indore. Dr. S.R. Deobhakta.

3. Kotate, Meena Dnyanu. *A study on Clam,* **Paphia laterisulca**. Shivaji U, Kolhapur. Dr. V.Y. Patil.

Forensic Science

1. Annapoorani, K.S. *Analytical biochemistry in forensic science.* U Madras. Dr. C. Damodaran.

2. Chandra Sekharan, P. *Skeletal identification in murder cases by physical methods.* U Madras.

3. Gunachandran, N. *Biological parameters in forensic science.* U Madras. Dr. C. Damodaran.

4. Kuppusamy, R. *Forensic physics.* Bharathidasan U, Tiruchirapalli. Dr. P.K. Ponnusamy.

5. Mohan Raj, B.K. *Biological parameters in forensic science.* U Madras. Dr. C. Damodaran.

6. Nalinasundari, S. *Forensic entomology.* Madurai Kamaraj U. Dr. S. Chockalingam.

7. Nandagopal, K. *Forensic science.* U Madras. Dr. G.J. Srinivasan.

8. Naziruddin, B. *Biochemical parameters in forensic science.* U Madras. Dr. C. Damodaran.

9. Ramachandran, B. *Soil analysis: A forensic evaluation.* U Madras. Dr. G.J. Srinivasan.

10. Selvakumar, A. *Biological parameters in forensic science.* U Madras. Dr. C. Damodaran.

11. Watson, B. *Chemical parameters in forensic science.* U Madras. Dr. C. Damodaran.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Bajaj, Nirmala. *Fixed point theorems in functional analysis.* HS Gour, Sagar.

2. Dange, Arvind Vishwanath. *A study of certain aspects of hypergeometric functions of two and more variables.* Devi Ahilya, Indore.

3. Pandey, Narwdeshwar. *Theory of certain integral transorms of generalized functions.* Kum U, Nainital.

4. Raj Nath. *Some aspects of thermal and mass diffusion on MHD flows.* BHU, Varanasi.

5. Rakshit, Atanu. *Some studies on graph algorithms and applications.* U Calcutta.

6. Saxena, Ram Babu. *Some problems in analysis.* HS Gour, Sagar.

7. Shivaraya, E.S. *Stability of convection in porous media and in conducting fluid.* Bangalore U.

8. Singh, Jagdish Prasad. *Some studies in homogeneous and inhomogeneous cosmologies in general relativity.* BHU, Varanasi.

9. Singh, Surendra Prasad. *Some contribution to the theory of Atkinson and Fresholm operators.* Mag U, Bodh Gaya.

Statistics

1. Mishra, Rabindra Nath. *Some stochastic models and their utility to describe birth interval data.* BHU, Varanasi.

Physics

1. Anantha Lakshmi. *Theory of optical hanle effect in atomic beams and in cavities under arbitrary pumping conditions.* U Hyderabad.

2. Ashok Kumar. *Temperature and pressure dependence of internal magnetic fields and electric fields gradianits through perturban angular correlations.* Pb U, Chandigarh.

3. Chakravarty, Saradindu. *Studies on the earth's upper atmosphere in interaction with 3 k cosmic background radiation.* Gauhati U.

4. Dua, Satyendra Chandra. *Mossbarur studies of condensed systems.* NBU, Rajarammohunpur.

5. Kushwaha, R.P.S. *Energy transfer in some luminescent systems.* Kum U, Nainital.

6. Majumdar, Parthasarathi. *Electron impact excitations and ionization of atoms.* U Calcutta.

7. Menon, Vairelil Jayaram. *A description of nuclear two body resonant state in potential scattering theory using analyticity.* BHU, Varanasi.

8. Rai, Virendra Nath. *Photoacoustic spectroscopy of some materials (rare earth oxides, organic dye solutions, metallic thin films).* BHU, Varanasi.

9. Rokkam Ramanujam. *Ellipsometric studies on magnetised thin films of iron nickel and iron cobalt alloys.* Andhra U, Waltair.

10. Sheik Saleem, S. *Analysis of the laser Raman and infrared spectra of certain molybdates and phosphotungstate.* U Ker, Trivandrum.

11. Srivastava, Jagdamba Prasad. *Studies in thermoelectret and photoelectret status of polymeric material.* BKU, Jhansi.

12. Yadev, Ram Anjore. *Vibrational studies of substituted trifluromethyl benezenes.* BHU, Varanasi.

Chemistry

1. Barik, Bikasranjan. *Studies on some aspects of phytochemicals.* U Calcutta.

2. Basu, Aruna. *Biochemical studies on certain toxicants including rare earth and transition metal in animal system.* U Calcutta.

3. Dube, Rudra Mani. *Synthesis and structural investigations of acyle hydrazine schiff base complexes with some transition and inner transition metal ions.* BHU, Varanasi.

4. Ghosh, Bijayprasad. *Physico-chemical studies of inorganic materials.* U Calcutta.

5. Choudhuri, Manjusha. *Studies on natural products and organometallic derivatives of heterocycles.* U Calcutta.

6. Gururani, S K. *Thermal and photochemical studies on aqueous solutions of metal cyanide complexes.* Kum U, Nainital.

7. Jaiswal, Suneeta. *Studies on the chemistry of uranium and related cations.* BHU, Varanasi.

8. Jena, Satyaban. *Studies on vinyl polymerization and grafting (kinetics and mechanism of vinyl polymerization and grafting initiated by vanadium (V) — organic substrate redox pairs).* Utkal U, Bhubaneswar.

9. Jha, Chandra Shekhar. *Determination of stability constant of some of the first series transition metal complexes with lingands containing N, O or S as donar atoms.* LNMU, Darbhanga.

10. Joshi, Pushpa Devi. *Chemical studies on some aromatic medicinal plants of Kumaun.* Kum U, Nainital.

11. Kamat, Shivaram Venkatesh. *Synthetic studies in drugs and their intermediates.* Kar U, Dharwad.

12. Keshari, Vijaya. *Ab initio MO calculations of nuclear quadrupole couplings.* BHU, Varanasi.

13. Lahiri, Preeti. *Studies on some aspects of preparation and solubility equilibria of solid solutions of hydrozyl and chlorapatite of arsenic.* BHU, Varanasi.

14. Lakshminarayana, M.R. *NMR investigation of oil seeds, edible oils and oriented molecules.* Bangalore U.

15. Mallikarjuna Rao, K. *Studies in spectrophotometry and homogeneous precipation of certain metal ions.* SKU, Anantapur.

16. Mitra, Parthasarathi. *Some studies on aqueous consolute mixtures and on micelles.* U Hyderabad.

17. Mohanta, Mukunda Charan. *Studies in redox polymerization and graft copolymerization onto tussah silk involving cerium (IV) ICN.* Utkal U, Bhubaneswar.

18. Prabhakar, S. *Studies on collecting properties of chelating agents in mineral floatations: Chalocohyrite oxine and chalcohyrite cupferron systems.* SVU, Tirupati.

19. Pradhan, Gyanendra Chandra. *Studies on some aspects of co-ordination compounds of metals.* Sambalpur U.

20. Sahu, Bata Krishna. *Studies on the linkage modes of B-diketones in some palladium (II) and platinum (II) complexes.* Utkal U, Bhubaneswar.

21. Singh, Geeta. *Complexation behaviour of diorgano tin (IV) cations and a few other tetravalent elements with some bidenate ligands.* BHU, Varanasi.

22. Sivasankara Reddy, Narreddi. *New sesquiter penoids of bombax malabaricum.* U Hyderabad.

23. Tripathy, Sudhansu Sekhar. *Studies on vinyl polymerization and grafting (permanganate initiated vinyl polymerization and grafting in presence of organic substrate).* Utkal U, Bhubaneswar.

Earth Sciences

1. Bhanu Murthy, Parvataneni. *Studies on characteristics of the sediments in different sub-environments of the modern Krishna Delta.* Andhra U, Waltair.

2. Fulekar, M.H. *Release and behaviour of selected trace elements in soil water environment caused by coal fired power plants fly-ash disposal.* JNU, Delhi.

3. Gorantiwar, Sharad Madhavrao. *Availability of potassium to rice in three soil series of Jabalpur.* JN Krishi, Jabalpur.

4. Haridas, P. *Zooplankton studies in the Cochin environments.* U Cochin.

5. Koneru Venkata Siva Rama Prasad. *Studies on coastal and near shore dynamics off Madras port.* Andhra U, Waltair.

6. Pande, Meera. *Biostratigraphy of Bhowali-gethia area, Nainital District, Kumaun Himalaya.* Kum U, Nainital.

7. Pandey, Dhirendra Kumar. *Biostratigraphical and palaeoecological studies of the bathonian-callovian rocks in Khavdasadhara area, pachchham 'Island' (Kachchha, Gujarat).* BHU, Varanasi.

8. Shaik Abdul Hakeem. *Some numerical weather prediction experiments over Indian region with barotropic models.* Andhra U, Waltair.

9. Sharma, Sudhirendar. *Status and distribution of selenium in some soils of Delhi and assessment of its critical levels of accumulation in wheat and sorghum plants.* JNU, Delhi.

10. Singh, Vijay Kumar. *Aerobiological survey of Rewa with special reference to the distribution of microbiological matter.* APSU, Rewa.

11. Talib, Abdul Rashid. *Studies on the pedogenesis and K supplying capacity of the bench mark soils of Kashmir.* HP Krishi, Palampur.

Engineering & Technology

1. Chakraborti, Niharranjan. *Study of some characteristics of type joint type flexible couplings.* U Calcutta.

2. Satya Prakash. *Physico-chemical studies on utilization of felspar mineral waste for making improved building materials from unsuitable soils.* BHU, Varanasi.

CLASSIFIED ADVERTISEMENTS

NORTH EASTERN HILL UNIVERSITY
LOWER LACHAUMIERE
SHILLONG-793 001.

No. F. 1-4/Estt. II/84 **Dated : 31-5-1984**

Applications on plain paper are invited from Indian citizens for the following posts in the North-Eastern Hill University Campuses at Shillong (S), Aizawl(A), Medziphema, Nagaland (M) and Pachhunga University College, Aizawl (P).

Sl. No.	Name of the Posts	No. of Post	Scale of Pay
1.	Deputy Registrar	1 (A)	Rs. 1100-50-1600/-
2.	Assistant Registrar	3 (S)	Rs. 700-40-900-EB-40-1100-50-1300
3.	Administrative Officer	1 (M)	-do-
4.	Junior Statistical Officer	1 (S)	-do-

Essential Qualifications

Sl. No. 1.

(a) Second Class Master Degree or equivalent.

(b) Seven years administrative experience with at least 4 years in Class I preferably in Educational Administration.

Desirable

Experience in personal management; experience in organising meeting/conference etc; experience in developing corporate life.

OR

A member of All India/State Civil Services with suitable experience.

Sl. No. 2 & 3

(a) Second Class Degree or equivalent.

(b) Seven years administrative experience preferably in Educational Administration.

Desirable

For one post experience in Examination work.

For one experiencing of accounting & Cash transaction.

Sl. No. 4

A second class Master Degree in Statistics/Mathematics or Economics with Statistics or equivalent.

The applications indicating name, present address, age, qualification in detail, experience and other relevant particulars should reach the Registrar, North-Eastern Hill University, Lower Lachaumiere, Shillong-793 001, Meghalaya on or before **15-7-1984** along with an Indian Postal Order of Rs. 10/- (Rs. 2.50 for ST/SC) payable to North-Eastern Hill University, Shillong.

Note

1. Persons already in service should submit their applications through their employers.
2. Besides the basic pay the selected candidates will be entitled for the allowances admissible to the corresponding official of the Government of India posted at Shillong/Mizoram/Nagaland.
3. Candidates called for interview will be paid Second Class T.A.

A. Patton
REGISTRAR

JADAVPUR UNIVERSITY
CALCUTTA-32

Employment Notification No. A2/C/5/84
Dated : 29th May 1984

The University invites applications for the following posts of Part-time Lecturer on purely temporary basis :

Part-time Lecturer in Library & Information Science (Day) —2 Posts

Qualifications

Essential

(a) A Doctor's degree or research work of an equally high standard; and

(b) Good academic record with at least second class Master's degree in Library and Information Science **OR** Master's degree in any subject having good coverage of the topic/topics mentioned under specialization from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M.Phil. or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years.

Explanation

For determining "good academic record" the following criteria shall be adopted :

(i) A candidate holding a Ph.D. degree should possess at least a Second Class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high Second Class Master's degree and Second Class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing Second Class Master's degree should have obtained first Class in the Bachelor's degree.

Persons having secured marks more than the mid point of the **prescribed minimum marks for passing an examination in the second div./class and the prescribed minimum marks for passing an examination in the first div./class by a University shall be deemed to have passed that examination in the high second class.**

Specialisation

Ability to teach: Application of Statistical method and operational research in library management/Application of Computers in Library and Information Science/Management of Library and Information systems.

Remuneration

Upto 4 periods/week : Rs. 275/-p.m.

Age

Not exceeding 60 (sixty) years.

LAST DATE OF RECEIVING APPLICATIONS IS 25th JUNE, 1984.

Application forms are obtainable from the University Office during working hours on payment of Rs. 2/- or by post on payment of Rs. 2/-+Re. 1/- for postal charge. Those who are in employment should apply through proper channel. Choice of the Appointment Committee will not necessarily be confined to applicants only. Canvassing in any form will disqualify a candidate.

REGISTRAR

UNIVERSITY OF RAJASTHAN

JAIPUR

Advertisement No. 6/84(T)

Dated : 7-6-1984

Applications are invited for the under mentioned posts so as to reach this office on or before **6th July, 1984,** in the prescribed form available from the Registrar's office on pre-payment of Rs. 4/- (Rs. 4/- extra in case required by post). In the case of persons already in employment the applications are to be sent through proper channel :

(1) Professor in Centre for Development of Physics Education—1.

Scale of Pay (Rs. 1500-60-1800-100-2000-125/2-2500).

(2) **Associate Professor*** in Centre for Development of Physics Education—2.

Scale of pay (Rs. 1200-50-1300-60-1900).

*Filling of the posts of Associate Professor is subject to the clearance by the State Government.

Note:

1. Details of qualifications etc. will be made available with application forms.
2. The University reserves the right to increase or decrease the number of posts.
3. The University also reserves the right to consider persons in absentia for the post of Professors even though they have not applied for the post.
4. Persons selected for the posts of Associate Professors may be posted in any unit of the University.
5. Applications received on plain paper/after expiry of last date or incomplete applications will be rejected without making any reference.
6. Candidates are required to apply separately for each post on prescribed form.
7. 16% posts for scheduled castes, 12% posts for scheduled tribes and 3% posts for physically handicapped candidates are reserved and will be filled in as per rules formulated by the University in this respect.

REGISTRAR

ANNAMALAI UNIVERSITY

ANNAMALAINAGAR

6th June, 1984

Applications are invited for filling up one post of Professor-cum-Director for the State Bank Chair in Rural Development. Applications can be had from the undersigned on payment of Rs. 10/- (not refundable) by cash/money order/Postal Order. Applications (with 5 additional copies) should reach the undersigned on or before 5.00 P.M. on **16-7-1984**.

Scale of pay

Rs. 1500-60-1800-100-2000-125/2-2500 with usual allowances. Higher start will be given for experienced hands.

Age Limit

Preferably between 45 and 55 years.

Conditions of Service

The selected candidates will be appointed for a period of 3 years in the first instance.

Qualifications:

Essential

M.A. Degree in Economics with First Class or at least B+grade with 55% marks

OR

M.A. degree in Rural Development with First Class.

OR

Post-Graduate qualifications in Agricultural Economics with First Class.

Desirable

Ph.D. Degree in Economics or Agricultural Economics with specialisation in Rural Development or Rural Planning.

Persons of eminence or high attainment in the fields related to Rural Development will be preferred and qualifications may be relaxed in their case.

R. Rajamanickam
REGISTRAR-IN-CHARGE.

UNIVERSITY OF RAJASTHAN

JAIPUR

Advertisement No. 4/84(T)

Applications are invited for the under mentioned posts so as to reach this office on or before Monday the **25th June, 1984,** in the prescribed form available from the Registrar's office on pre-payment of Rs 4/- (Rs 4.00 extra in case required by post). In the case of persons already in employment the applications are to be sent through proper channel :

(1) Professors—Scale of pay (Rs. 1500-60-1800-100-2000-125/2-2500). University Science and Instrumentation Centre—1, Philosophy —1, (to fall vacant in October-1984), Chemistry—1, Zoology—1,

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UNIVERSITY NEWS

University News is published weekly by the Association of Indian Universities to promote awareness of contemporary thinking on higher education. Views expressed in the journal are those of the authors and do not reflect the policies of the Association.

Articles are invited by the Editor on matters relating to University education. Manuscripts (in duplicate) should be sent to the Editor, University News, Association of Indian Universities, AIU House, 16 Kotla Marg, New Delhi-110002. They should be typed on one side of the paper, double spaced with wide margins. Each article should be accompanied by a summary/ abstract of 100/150 words on a separate sheet.

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For Academics/ Students	30		
2 Years	72	330	650
3 Years	100	425	900
5 Years	150		

Statistics—1, English—1, Political Science—1, Public Administration—1, Law—1, Physics—1.

(2) Associate Professors*—Scale of pay (Rs. 1200-50-1300-60-1900). Physics—2, Chemistry—2, Botany—2, Zoology—2, Geology—1, Mathematics—1, Statistics—1, English—1, Hindi—2, Sanskrit—1, Urdu—1, Russian—1, French—1, Political Science—1, Philosophy—1, Sociology—1, Pub. Admn.—1, Economics—1+2=3 (one post is to fall vacant in October 1984 and another in January, 1985), Geography—1, Psychology—1, History & Indian Culture—3, Library Science—1, Law—1, Home Science—1, Dramatics—1, Logic—1, (for S.A.P. in Philosophy).

(3) Electron Microscopist—Scale of pay (Rs. 1200-50-1300-60-1900)—1 (One).

(4) Assistant Professor*—Scale of pay (Rs. 700-40-1100-50-1600) Home Science—1.

*Filling of the posts of Associate Professor & Assistant Professor is subject to the clearance by the State Government except for the following posts: Associate Professor—Hindi—1, Economics—2, Dramatics—1, Logic—1 and History—2.

Note :

1. Details of qualifications etc. will be made available with application forms.
2. The University reserves the right to increase or decrease the number of posts in any subject depending upon the requirement.
3. The University also reserves the right to consider persons in absentia for the posts of Professors even though they have not applied for the post.
4. Persons selected for the post of Associate Professors/Assistant Professors may be posted either in constituent colleges or in the Institute of Correspondence Studies.
5. Applications received on plain paper/after expiry of last date or incomplete applications will be rejected without making any reference.
6. Candidates are required to apply separately for each post on prescribed form. Applications received against previous advertisements will not be considered.
7. 16% posts for scheduled castes, 12% posts for scheduled tribes and 3% posts for physically handicapped candidates are reserved and will be filled in as per rules formulated by the University in this respect.

ASSAM AGRICULTURAL UNIVERSITY
JORHAT
Advertisement No. 4/84

Applications are invited in the prescribed application form obtainable free by sending self addressed 0.90 paise stamped envelope of the size 23x10 cm. from the undersigned for the post of Editor (Research Publications) of Assam Agricultural University, Jorhat in the scale of pay of Rs. 1200-50-1300-60-1900/- p.m. plus other allowances as admissible under the University rules.

Essential Qualifications : (i) Bachelor's degree in Arts or Science subjects followed by Master's Degree in English or Journalism. (ii) Doctorate degree in English or Journalism. (iii) Specialisation in Journalism. (iv) At least 5 (five) years experience in editorial/publications works/teaching and/or research and/or extension out of which at least 3 (three) years of experience shall be in the rank of Assistant Professor or equivalent after Ph.D. Degree on the last date fixed for receiving applications in case of candidates who are Ph.D. Degree holders at the time of recruitment to the rank of Assistant Professor.

OR

Candidate with Bachelor's Degree in Arts or Science subjects followed by Master's degree in English or Journalism with consistently good academic record as evidenced by published work in standard journals of Research and/or innovations in teaching methods and/or production of teaching materials and/or extension works and/or publication matters and with at least 7 (seven) years experience of journalism and/or teaching and/or research and/or extension after Master's Degree out of which at least 3 (three) years must be in the rank of Assistant Professor or equivalent on the last date fixed for receiving applications are also eligible but such candidates must earn the Ph.D. Degree within 8(eight) years from the date of placement in the U.G.C. pay scale. Candidates failing to obtain the Ph.D. Degree within the specified time shall not be granted next incremental benefits in the pay scale.

Desirable : (i) Evidence of published work in Standard Journal of Research. (ii) Experience of Journalism in Standard Journal or newspaper or teaching P.G. courses and/or guiding/conducting/research/extension education programmes. (iii) knowledge of rural Agricultural situation in Assam. (iv) Knowledge of local languages of Assam.

N.B. Period spent on higher studies leading to Ph.D. Degree not exceeding four years in case of an inservice candidate of Assam Agricultural University on study leave will be considered towards calculating total requirement of service experience.

Applications complete in all aspects together with an Indian Postal Order for Rs. 7.00 (Rs. 3.50 in case of Scheduled Caste/Tribes candidates) drawn in favour of the Deputy Registrar (Personnel), Assam Agricultural University, Jorhat-13 should reach the undersigned by **30th June, 1984**. The applications received after expiry of the last date will not be entertained. Persons already in service should apply through proper channel. The candidates will be required to appear for interview at their own costs as and when called for.

K.N. Chutiya
DEPUTY REGISTRAR
(Personnel)

BANASTHALI VIDYAPITH
(Deemed to be University)
Advertisement No. 3/84

Applications are invited for the following teaching positions:

A. Professors

Sanskrit-1, English-1, Political Science-1, Economics-1, Sociology-1, Drawing & Painting-1, Music-1, Home Science (Child Development)-1.

B. Readers

English-1, History-1, Home Science (Child Development)-1, Drawing & Painting-1, Dance-1.

C. Lecturers

Hindi-1, English-1, Political Science-1, German-1, Music (Vocal)-2, Music (Instrumental Sitar)-1, Sociology-1, Home Science-6 (Child Development-1, Home Management-1, Food & Nutrition-1, Physiology & Hygiene-1, Clothing Textile-2), Physics-1, Chemistry-3 (Analytical-1, Specialisation in Organic & Inorganic both-1, Biochemistry-1), Biology-1, Statistics-1, Education (Sanskrit teaching)-1.

Qualifications

As laid down by the U.G.C.

Pay-Scales

Professors

Rs. 1500-60-1800-100-2000-125/2-2500.
(Present total initial emoluments Rs. 2460)

Readers

Rs. 1200-50-1300-60-1900.
(Present total initial emoluments Rs. 2160)

Lecturers

Rs. 700-40-1100-50-1600.
(Present total initial emoluments Rs. 1504)

Notes :

(1) Applications on prescribed form (obtainable free of cost by sending stamped self addressed envelope of 9"x 4") accompanied with postal order of Rs. 10/- and certified copies of Mark-lists of all examinations from Secondary to Master's degree, M.Phil/Ph.D. and copies of published research papers must reach The Secretary, Banasthali Vidyapith, P.O. Banasthali Vidyapith (Rajasthan) 304022 by **7th July, 1984**. (2) Vidyapith reserves the right not to fill up any of the posts advertised. (3) Mere fulfilment of minimum qualifications will not give right for being called for interview. (4) All appointments are made in the first instance on probation. (5) D.A. at Rajasthan Government rates. Benefits of P.F., Gratuity-cum-Insurance on confirmation. Residential accommodation at nominal rent. (6) Higher start may be considered by the Selection Committee on merit. (7) The Selection Committee may consider persons in absentia for the posts of Professors even though they may have not applied for the post. (8) Separate application for separate posts required. (9) Other things being equal women candidates preferred. (10) Return first class fare (maximum Rs. 300) for posts A & B & II Class return journey rail fare (maximum Rs. 100 for appearing at interview for C. (11) Teachers are expected to become habitual wearers of KHADI on appointment.

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Editor :
M.S. RAMAMURTHY

Supreme Court on Quota Limits for Medical and Dental Seats : Some Salient Points

The Supreme Court of India, in a judgement delivered on June 22, 1984, has laid down limits upto which seats can be reserved by universities for admission to Medical Courses. Some features of the judgement as gleaned from Press reports are :

● Upto a maximum of 70 per cent of the total number open seats for admission to MBBS courses can be reserved for admission in any Medical College in India on the basis of domicile. This will also take into account all other kinds of reservations like giving preference in admissions to those who have passed the Pre-University, Pre-medical or other qualifying examination from the school or University system of the "educational hinterland of the medical colleges in a State or a Union Territory."

● No distinction can be made between an examination conducted by a State Board and the Central Board of Secondary Education.

● For admission to postgraduate courses in Medicine, reservation upto 50 per cent of the total number of open seats can be made by the medical college on the basis of institutional preference which means that a student who has passed MBBS Course from a medical college or University may be given preference for admission to the postgraduate course in the same medical college or university.

● No reservation can be made on the basis of residence in a State for admission to postgraduate courses. In "super-specialities such as Neurosurgery and Cardiology" no reservation should be allowed even on the basis of institutional preference.

● The Medical Council of India (MCI) must consider within nine months from June 20, 1984 whether the limits of 70 per cent for undergraduate courses and 50 per cent for postgraduate courses laid down above for reservations can be reduced. The recommendations of the MCI would be binding on all States and Union Territories.

● The MCI must review the limits every three years.

● Admissions from the sources indicated for reservation must be made on merits.

● These directions also apply to Dental Courses.

Towards A Learning Society Through Life-Long Education

Prof. Ramlal Parikh, Vice-Chancellor, Gujarat Vidyapith & Chairman, Indian Society for Community Education, delivered the Presidential Address at the Second National Conference on "Towards A Learning Society Through Life-long Education" held on April 14-16, 1984 at Sarnath (Varanasi). The text of his address is given below.

"I feel immense joy in being able to hold this Second National Conference of ISCE at such historic place of Sarnath from where Lord Buddha preached his message of enlightenment "Dharma Chakra Pravantanam". For most of us coming from high pedestals of universities and colleges it is refreshing to be here for couple of days in a place where words of Buddha resounded and from where the greatest experiments of people's education were launched in the history of Mankind. It is a great privilege and honour to be in this historic and inspiring place. The venue of this Conference which is to discuss the theme of Learning Society through Life-Long Education is itself significant and provides a new enlightenment to all of us for transforming our Adult & Continuing Education programmes for its peace-meal and adhocist approach to a well-nit community-based community-education. We do not need to impart the content of community education from foreign lands as we have a richest heritage of "Lokshikshan" from the days of Gautam to Mahatma Gandhi. The ISCE and myself both are extremely grateful to the Vice-Chancellor of BHU and its most dedicated Professor Dr. Y.N. Mishra for giving us such a splendid opportunity of finding a new enlightenment to meet the ever-increasing and gripping crisis in the entire educational process in our country as well as all over the world. We are particularly honoured by the presence of the distinguished Vice-Chancellor of the BHU who has so kindly inaugurated our Conference.

Mahatma Gandhi pleaded for "equal stress on adult education with that of children" and thus advocated an integrated approach in any educational process. The education of children and adults are not two independent parallel streams but a learning process promoting an integrated Social Development. In education, integration is to be sought between body-mind and spirit within the Individual. It is also to be sought between Home, School and Community. Both aspects of education have to function with mutual as well as inter-se harmony. All encompassing crisis in contemporary education is now sought to be resolved by fostering a parallel stream of education in the name of non-formal education, adult education, continuing education, life-long education, etc.

While the length of education in time-span is being extended, its integral and inter-se relationship between Home, School and Society is not being effectively explored. Traditional education has a segmentive approach and therefore we have child-education, adult-education, women-education, etc. as separate and independent programmes of education. The segmentisation and sectorisation of education is so deep that a comprehensive view of education related to totality of life as such has not come to the fore in our educational process.

While education increases knowledge in the sense of information, it creates new barriers between young and old, between school and home, between home and community and between different sections of people belonging to different walks of life.

Thus contemporary education while growing rapidly in quantitative terms, is becoming more and more fragmentive and alienating. Education far from becoming a harmonising force is creating new imbalances. The answer lies not in formal education only and not in non-formal education only, but in securing a balanced learning process where the dividing lines between formal and non-formal education disappear and learning pervades all aspects and all processes of life-at all stages, in such a way that each stage or form of education enriches the other. This is what is sought to be achieved through Community Education now.

The contemporary formal education has not only proved very inadequate in terms of learning process, but has also failed in bringing large sections of Indian Society within its compass. This is evident from the fact that we have over 100 million students not enrolled in the elementary schools against 100 million students enrolled in the schools, half of whom very soon join the unenrolled mass as drop-outs. Our educational system is therefore far away from becoming national and still far away from becoming a peoples' movement. This leads us to new and most challenging dimensions of education and learning, not attempted before on a scale that we are confronted to attempt now. This raises series of questions, such as:

(1) How do we promote a learning society?

(2) How can we ensure a continuing process

of life-long education?

(3) Is life-long education meaningful without being life-centred?

(4) What are the institutional arrangements to make education life-centred?

(5) How can we liberate ourselves from the segmentive and fragmentive approach of traditional education and make it a unifying and integrated process?

(6) How can education contribute to social and economic development?

(7) How can we transform the existing adult education and continuing education programmes into community education by adopting a community approach?

(8) What does the term "Community" stand for?

(9) What is the role of universities in fostering the practice of community education?

Let us attempt to find some answers to these fundamental questions.

(1) It should now be clear that learning society cannot be promoted by expanding enrolments in schools without linking schools with the home and community. It can be perhaps achieved through a meaningful relation of home and community with our entire educational infrastructure operating at all levels. The concept of school hours, teaching hours and the school and college working on a particular time of the day will need a thorough change atleast in attitudinal context. This will need the transformation of all types of educational institutions of an area into almost round-the-clock open institution where people of all sectors of the community should be able to come, work, learn or play at any time of the day. The learning society will not emerge from mere expansion of non-formal education as a parallel stream of formal education but it will emerge through an ideological fusion of formal and non-formal education.

(2) The education is meant for enlightenment of the learners which cannot freeze at any point of time in the life. It has to be a continuous and unending process. In the words of Gandhiji it has to be a "Womb to Grave" process. There is no age when it can say that person now does not need to learn. The idea of "Terminality" through certificates, diploma, etc. is fast becoming redundant. There cannot be terminality in a learning process.

(3) The concept of life-long education gives too much stress on the length of time-span in education rather than its relation to life. It is not merely a question of extending the length of education. It is a qualitative approach of keeping life and learning together in such a way that both continue to enrich each other, throughout the life. Unfortunately this spirit of life-long education is not adequately stressed. As a result even the movement for life-long education does not have a desirable impact on the educational systems and learning processes of the society. Even life-long education can become a drudgery, it is not life-centred. The approach, and methodology of learning are therefore very important than mere acquisition of information even though a self-learning process.

(4) If life-centred life-long education is to be promoted the existing institutional arrangements for both formal as well as non-formal educational will need basic changes. The existing institutions will have to be transformed into community learning centres; where people of all ages and all profession can meet and share their knowledge and experience to each other. This will not be just a club for relaxation but a meaningful and systematic arrangement to share knowledge and imbibe new knowledge in the process. The physical facilities and human resources of existing schools and colleges will be thrown open in an organised manner for the benefit of the entire community of the area where the educational institution is located. The community education movement does not necessarily need creation of new physical or human infrastructure but it shows the way to maximise the use of existing infrastructures. It shows the way to make a multi-dimensional use of existing institutional framework. Every elementary school, high school and college can be transformed into a community education centre by making multiple use of its facilities and by extending its facilities for the entire community in such a way that the entire community feels involved in it and develops a sense of belonging to the institution offering learning opportunities.

(5) Education or any learning process must be harmonising and unifying process. By linking formal and non-formal education together and by bringing all non-formal programmes under one umbrella, we can facilitate our liberation from segmentisation and fragmentiveness of the traditional models of education and learning. If education continues to segmentise us and continues to fragmentise us, it would lose its utility. While disciplines of knowledge are important, these should not be specialised to the extent of alienation of the leaner from the generality of knowledge. It should in any case not alienate the learner from his or her community. We have been looking too much beyond without looking around much less looking within. In the words of the International Commission of UNESCO "More go to school than ever—and more than ever stay outside". This tragic outcome of education is due to the fact that our learning processes by and large equip us to look beyond without looking around and within.

(6) Education's social dimensions are unfolding rapidly. It is therefore impossible to think of a

learning process devoid of social obligation. Education or learning is a means and not an end in itself. Social obligation and social accountability of education implies a live and constant linkage with the community. Such a linkage through community education will enable the education to contribute to the socio-economic development of the community. Far more important is the education's role in social development which is virtually neglected in our planning process.

(7) In the above perspectives a communitarian approach in Adult and Continuing Education programmes is necessary. Community Education is not an additional item in the long list of formal or non-formal programmes of education but a process and approach. The Adult/Continuing Education movement, by adopting a community approach, will become more meaningful and fruitful and its impact will be immediately felt on the lives of the community. The question is not of touch and go with the community but of being one with it and being a part of the collective personality of the community. We will not be able to sustain the Adult & Continuing Education movement without a community approach. The community will be both a source as well as a beneficiary of the learning process. Instead of everybody looking up in a vertical manner there will be horizontal relationship with the community. It should be imperative for every centre of Adult & Continuing Education to adopt a community and design its programmes after fresh identification of its learning needs and involve the community both in formulation as well as implementation of the programmes.

(8) It should be clear that the term "COMMUNITY" stands for a secular, non-sectarian egalitarian social order. There should therefore be no question of any consideration of caste, creed, or religions denomination in identifying or treating the community. The heterogenity of a community is a virtue in this type of learning process. The "Community" of community education must be above any divisive tendency.

(9) The formal educational institutions particularly higher educational institutions have to play a great role in extending their institutional net-work to the community. This is not a question of a peripheral role but of achieving an almost interlocked arrangement of linking education of the people with our high pedestals of learning. Just as a laboratory is imperative for teaching or learning of science, integral relation with the community should be a part of any educational process. This relationship should not be casual or incidental but an inherent part of curricular arrangement. The role of universities, particularly its centres of Adult/Continuing Education is very crucial in this. It is a great landmark in the history of Indian education that the UGC has recognised the "Extension" as the third dimension of higher education equal in importance with teaching and research. This new policy thrust being now implemented under the vigorous leadership of the UGC Chairman Dr. Madhuri Shah has opened up immense potentialities in linking education with the people. This can transform the entire edifice of our educational pyramid. Added to this is 20-point Programme of the Cental Government, with its stress on widening of Adult-literacy programmes, universalisation of elementary education and population education. This reinforces our efforts to bring education and people together and therefore it is our duty, in our own interest, to help a nation-wide effective implementation of Point No. 16 of 20 Point programme. Community Education provides a much needed wholistic frame-work to Adult Education.

Fellow delegates, it is in these contexts that we are meeting today to devise concrete steps to implement and practice community education. This Conference is assigned to do this with particular reference to "Human Resources" and Community Development". Both these are very pertinent areas of our national debate. I am confident that the distinguished delegates will precisely identify the exact components of these two dimensions of our development process which like education continues to work in an alienating manner. We have therefore a very great and challenging task before us and much will depend on how ably we respond to this.

I thank you for your support and cooperation during the last one and a half year since we met at Ahmedabad. Your cooperation in celebration of N.F.S. Grundtvig's bicentenary and Dublin Conference has made it possible for all of us to join the world fraternity of community education. It is a matter of great rejoice that we had, the largest delegation from developing countries at the 4th International Conference of Community Education at Dublin in August last year.

I thank you again and look forward to your continued support and cooperation". ☐

Economics of Educated Unemployment and Capital Formation in India

S. L. Tulsyan*

Capital formation depends upon the difference of income and consumption. The more this difference, the faster would be the rate of growth. But what is needed is that the Indian entrepreneur should employ these factors towards capital formation.

The main reason of unemployment in India is the existence of lesser amount of capital as against the increasing labour-power. The reason for the scarcity of capital goods is the meagreness of employment and savings. Keynes has supported the policy of public-building work for removing unemployment. But these policies can be put through only if the employment exists as a result of a decrease in demand. At this stage there is no scarcity of capital goods and the willing working capacity. When there is an increase in public expenditure and there is provision for deficit budget for making amends for this, there is an increase in the amount of production and employment. But different is the situation prevailing in developing countries like India. It has no scarcity of labour-power. Here the increase in public expenditure is not followed by an increase in production instead it gives rise to inflation. There is also a scarcity of subsidiary resources of the capital in India. As a result the supply curve remains invariable.

The only durable remedy for this is to make rapid economic development and at the same time the national income should be increased more rapidly than the labour-power. So, there is a need for rapid formation of capital. The formation of capital in backward countries is very difficult. The reason is that after supplying the consumer needs of the country, very few resources are left. Thus, there is a need for encouraging savings and these savings should be employed in production work. Such developing countries should save more and consume less. The stock of capital of a country can be increased by raising employment, but for this it is necessary for the society to save a little more. The rate of capital formation should be so high that employment opportunity should always keep increasing and whatever be the increase in population, employment should be made available to the increased population, whatever it be. During the previous years the rate of employment has not gone up by which the population in India has been increasing. Due to non-availability of adequate resources of employment, the majority of people are employed in agriculture. In agriculture their marginal productivity is very meagre or is equal to nothing. If other means of employment could be made available to them, they would run away from agriculture.

Today nobody would deny it that unemployment in India is menacing problem and cannot be removed only by the development of various small and big industries. Hundreds of millions of people in the rural and urban parts of India are unemployed and every year their problems keep growing owing to the increase in population. The position of unemployment does not only make the lower and middle classes spend their life miserably, but the entire society and the nation find it difficult to save itself from its ill consequences.

The main reason of unemployment in the fully developed western countries is the existence of less of active demand. Most monetary wages in those countries remain permanent and hence great change takes place in the level of employment even for a slight change in active demand. The larger expenditure of people in rural parts of our India is from their wages. Real wages and monetary wages get to-gether. Such wages do not allow much room for change and, therefore, the level of employment in India does not increase or decrease in proportion to active demand. In developing countries, the problem of unemployment is how to raise the amount of employment opportunity by raising the supply of capital-goods and by bringing about under the economy due change pertaining to organization. Our government, after having taken this problem for granted, has implemented the developmental programme and some developmental plans are being made. The progress of the developmental programmes does not conform to the increasing population from the point of view of increased population. Here the increase in employment opportunities is not according to the increase in population. Again, no arrangement has been made under our plans for the increasing labour-power.

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*Department of Commerce, Koshi College, Khagaria (Bihar).

The problem of the educated unemployed in India is grave and fraught with danger. Now it has taken on enormous proportions. Even the Sapru Committee of Uttar Pradesh had upheld this view. The educated unemployed lose self-confidence in this kind of unemployment and man's propensity for education also gets a set-back. The only reason for this is our faulty system of education. The nature of education in our country is bookish. The system of education prevalent in our country is far off from its practicability. Every year, there is sure a large scale production of graduates with no adequate demand for their absorption. There is less of alternative course of action for our educated youth or it is not such as will give him an opportunity for leading an honourable life. He finds it hard even to get that standard of living available to him during the period of education. There should be more technical and vocational institutions so that our youths after being trained there may run small cottage industries themselves. Within this there would be no problem of searching for a job anywhere. For absorbing population in services there is a need for existence of adequate number of jobs. In fact, only through economic and industrial development inside the country there can be any increase in the amount of services for the people. Therefore, the actual remedy is that full exploitation of the economic resources of the country be made by an all.purpose development plan in order to increase employment opportunities.

During ordinary period doubtlessly unemployment pervades among all classes of people of our country. One reason at the root of all sorts of unemployment is the economic backwardness of the country. No proper and full utilization of the productive factors of the country is being made. Under such circumstances the only remedy is speeding up the rate of economic development and increasing the said rate by the side of the growing population of the country as also with other factors. In fact, unemployment is not a natural calamity, but is the outcome of the faulty human institutions. It occurs when the economy cannot adjust itself under the changed circumstances, for example, with growing population. No problem of unemployment can arise if equilibrium is maintained between consumption and production. So, we should prepare our economy in such a way that there would be equilibrium between the tendency for consumption and the capacity for production. It is extremely necessary to remove unemployment. Harm there is sure to be due to this, vice also spreads with it. The system of education currently prevalent can produce nothing but ordinary office clerks. A college degree is supposed to be magic passport for government service. The present educational system does not in any way fulfil our needs nor does it satisfactorily help the individual in facing the struggle for life.

Thus, the remedy for unemployment is to bring about improvement in the system of education. The facilities of education should be of various kinds. There should be more technical and job-oriented educational institutions in order that youths after being trained in some art may run small cottage industries themselves. Within this, there would be no problem of looking out for a job anywhere else. Arrangement should be made in the country of vocational education. At the same time the government should endeavour to make proper distribution of the trained persons under rural and urban sectors.

But together with improvement in education there is also the need for economic development. There should be jobs for absorbing people in them. In fact, only through economic and industrial development inside the country there can be an increase in the amount of jobs for the people. Thus, the actual remedy is only to see that full exploitation of the economic resources of the country are made by means of an all-purpose development plan so that there can be increase in job opportunities. ☐

Shri L. K. Jha Addresses Bhagalpur University Convocation

After a lapse of about 13 years a convocation was held at Bhagalpur University on April 18, 1984. This, the XX convocation was addressed by Shri L.K. Jha, Chairman, Economic Administration Reforms Commission of the Govt. of India. His address follows.

"Indeed what a joy it is to me to be back in Bhagalpur, the city of my birth, after an absence of more than two decades. What makes this visit even more pleasant is that it coincides with and in fact has been occasioned by the Convocation of the Bhagalpur University.

Let me first of all congratulate all those who have come here to receive the degrees for which they have been studying. They should not look upon this function as marking the end of their education. When one of my fellow students at Cambridge after getting his degree went to bid goodbye to his tutor, he said, "Sir, I have finished my education". The tutor looked up, smiled and said, "Really? My own education is not yet finished."

The true value of university education lies not in what you have learnt but in the development of your capacity to learn. The degree only indicates that you are now able to educate yourself without attending classes, listening to lectures or being submitted to examinations. Your real education lies ahead, as you step out of the campus of the university and step into the chaos which will constitute your universe.

It is not, I am afraid, going to be a pleasant change. There was a time, when colleges and universities were few, when a degree practically was a passport to a good, reasonably well-paid, white-collared job. Even though employment opportunities for the educated have multiplied manifold in the years after Independence, the problem of unemployment among the educated seems to be growing worse from year to year.

To no small extent, this deterioration is due to the over-expansion of institutions which award a degree. The fact that for entry into a large number of government services, a degree is a prerequisite, encourages parents and students alike to prefer degree courses over vocational ones. As a result in most public service examinations, the number of candidates is over a hundred times larger than the vacancies.

Shri L.K. Jha addressing the convocation

When I was Governor of Jammu and Kashmir and, therefore, the Chancellor of the two universities in that State, I had occasion to head a committee which was set up to examine what changes in the educational system should be introduced in order to improve the employment prospects of the students. I had then recommended that the Government should make its recruitment after the +2 stage and not prescribe a degree as the minimum qualification for most government jobs. Such a change would have two advantages.

Firstly, those who are recuited would receive further education of a kind which would be relevant to the service to which they are assigned. At present it often happens that the subjects studied for the degree are of no possible help to the successful candidates in the discharge of their official responsibilities.

Secondly, those who failed to qualify for a government service would consider the possibilities of taking up some kind of a vocational training rather than go for a general degree course. Colleges and universities will then only attract those who are genuinely interested in particular fields of study and want to devote themselves to research, teaching and other kinds of academic activity.

Although, since then, I have found much support for my approach from educationists and others, I do not know whether such a re-orientation of the educational system will come about. In any event, it will not affect those who have already got their degrees. To them I would say that a re-orientation of their own mental attitude can bring about a significant improvement in their prospects. This change has to be in their perception of what kind of work the educated should perform.

Coming from the past, there is a widely held view that those who are educated should occupy an office chair and sit behind a desk in urban surroundings instead of being out in the field and engaging themselves in productive activities. Even engineers aspire to become managers or to engage in marketing; they do not want to dirty their hands by handling machines. Doctors are reluctant to go to rural areas. This neo-casteism seems to come in the way of the degree holders pursuing certain vocations. This archaic trend must come to an end.

The very increase in the number of graduates means that they cannot be absorbed only in those jobs which they could pre-empt when their number was limited. Indeed, if we consider a situation in which college education has spread so much that every citizen becomes a graduate then it would follow that carpenters, blacksmiths, sweepers and taxi drivers, to name only a few vocations, will all be graduates. Otherwise, many services vital to the community cannot be performed at all.

We are of course nowhere near such a situation. We are still far away from the goal of attaining 100 per cent literacy. But what has to be taken note of is that with the tremendous increase in the number of graduates they must now seek new pastures, discover additional ways of earning a living for themselves and get out of the rut of tradition which constricts their thinking.

The first thing they must realise is that in the last analysis, employment is provided not by employers but by those who buy the goods or services which come out of the employment. No employer can afford to retain an employee who does not help in producing something which the people want and for which the people are prepared to pay. To this general principle, there is perhaps one exception, namely, service under government. Often government servants get paid whether or not they perform any useful service. But in general employees get paid not by employers but by consumers. Therefore when educated young men and women start their search for employment, they should not begin to look for an employer.

Instead, what they should try to discover it what the unsatisfied needs in the community are which they are capable of meeting. It is a tragic paradox that all around us there are agonising shortages which can only be met by more of productive employment, yet there is an inadequacy of employment opportunities. To some extent, this imbalance needs some corrective action by the planners. The Seventh Plan should give much higher priority to the satisfaction of the basic needs of the people and maximisation of opportunities for productive employment.

But much can be done by the educated themselves. They can make a bold effort to identify the shortages which they can meet, individually or collectively, with or without the assistance of the government or governmental agencies.

Shortages are particularly acute in backward areas, of which there is no shortage in the State of Bihar. Many items of daily use are often not available just because there are no shops to sell them, or no transport facilities to bring them from the cities, or because the total production in the country is less than adequate to meet all requirements. Then there is another type of shortage, not of goods but of services. Various types of equipment such as pumping sets remain idle because they are not being serviced or repaired. These very deficiencies can be viewed as opportunities for gainful employment in opening shops, running transport services, setting up additional production or providing the necessary service.

A major stumbling block in the way of embarking on such ventures, for those with inadequate means has been the shortage of finance. But with the programme launched by the Government of India to provide bank loans with the minimum of fuss and formality to the educated to become self-employed, it should be possible for them to launch such activities. In the process they will generate more employment not only for themselves but for others also.

If the educated turn to farming, agriculture can pick up and the State and its people can prosper. If those educated in different subjects like engineering, commerce, chemistry and economics can join hands and pool

[L to R] Shri L.K. Jha, Chairman, E.A.R.C., Govt. of India; Chief Guest; Dr. A.R. Kidwai, Chancellor, Bhagalpur University & Governor of Bihar and Dr. M.Q. Towheed, Vice-Chancellor, Bhagalpur University.

their resources, they can establish small-scale industries to which assistance, both from the Central and State Governments is always available. In the two most prosperous States of the country, Punjab and Haryana, it is not large-scale industry but agriculture and small-scale industry which keep the educated busy and have enriched the people. In these States, people don't talk of unemployment; they import labour from States like Bihar. The scope for raising agriculture output and setting up small-scale industries in Bihar is tremendous, particularly as it has the advantage of having plenty of subsoil water for irrigation, two large steel plants, which help the growth of engineering industries around them, and a major oil refinery, which sustains a large number of chemical industries downstream. No doubt, in promoting the development of the small scale sector, government departments have to play a role, but much more depends on the spirit of adventure and enterprise of young men and women with education.

The most immediate change has to be in the attitude with which those who leave educational institutions think of ways of earning for themselves. I fear, there is too much craving for posts of a certain kind as well as attempts to rely on patronage of one type or another to get them. It is only when you decide to strive on your own, to stand on your feet, to seek no favours and to rely on your merit that you can derive the full benefit of the education you have received.

A large number of Indians today are earning very handsome incomes in different parts of the world, in England and America, in the oil-producing countries as well as in others. Those who go out there can take with them no money, because our foreign exchange regulations will not permit them to do so. They enjoy no patronage. Their caste, creed and colour do not help them. If anything, they act as a handicap. Yet I have seen in England thousands of Indians, men and women, who came as immigrants, who either worked as factory labour or did some menial jobs, such as mopping the floor of airports, removing garbage and cleaning lavatories, and then from these humble beginnings, a good proportion of them have risen to run shops, own houses and to have quite a high income for themselves even by British standards. In America, the Indians rank as the most prosperous minority, with incomes running into lakhs of rupees a year. Among them, let me add, I have seen quite a number of people from this very State.

Why is it that the qualities people displayed in alien environment do not come to surface at home? Why do people long only for comfortable jobs and shun the toil which can be so rewarding to them and their country? The educated simply must rid themselves of such misconceptions and get put of this intellectual prison. It is with a spirit of self-confidence and self-reliance that I should like the recipients of degrees today to go out into the world outside." ☐

Food Science & Techno
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CALENDAR OF EVENTS

Proposed Dates of the Event	Title of the Conference/Seminar/ Symposium/Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted
August, 1984	Orientation course in Civil Engg. for Mechanical Engineers of Highways and Rural Works Department, Govt. of Tamil Nadu.	To expose Mech. Engrs. to Civil Engg. Construction and Practice.	Divn. of Surveying & Photogrammetry and Civil Engg. Deptt., Anna University, Madras	Prof. R. Palanivelu
August 18, 1984	Seminar on Role of Consultancy offered by Technical Institutions in Industrial Development	—	Deptt. of Mechanical Engg. IIT, Delhi.	Dr. K.K. Gupta
August 17-20, 1984	International Symposium on Gonadotropin Releasing Hormone in Control of Fertility and Malignancy	—	School of Life Sciences, Univ. of Hyderabad, Hyderabad.	Dr. P.R.K. Reddy

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Conference on Community and Population Education

The Second National Conference on Community Education & the First National Conference on Population Education were held at Sarnath, Varanasi, (U.P.) under the auspices of Centre for Adult/Continuing Education of the Banaras Hindu University. Prof. Ramlal Parikh, Vice-Chancellor of the Gujarat Vidyapith presided over both the conferences as he is the Chairman of Indian Society for Community Education & Indian Society for Population Education. Both the Societies seek to promote Community approach for social development.

Dr. Iqbal Narain, Vice-Chancellor of Banaras Hindu University inaugurated the conference on Community Education. The theme was "Towards a Learning Society Through Life-long Education". Dr. Iqbal Narain welcomed the efforts to extend community approach in Higher Education through Adult/Continuing Education Programme of the U.G.C.

Over 130 delegates from 50 universities and voluntary agencies as well as government departments participated in the conference. Memories of the place where Lord Buddha gave his first message of "Dharma-chakra Pravartanam" was recalled by all speakers and delegates. The role of Buddha as a Community Educator was also recalled.

In the final communique adopted by the conference delegates resolved to focus greater attention to micro-level communities and establish "Human resources Banks" for identifying and utilising local talents from the common people. It also called for designating all post-literacy programmes under community education to lend comprehensiveness to it.

The conference resolved to help step up 20-point programme of the Central Government in relation to Adult Literacy, Universalisation of Primary Education and Population Education.

The conference on "Grass-root Strategies on Population Education" was inaugurated by Shri Satpal Mittal, M.P. who is the Chairman of the Indian Association of Parliamentarians on Population and Development. The conference resolved to co-operate with parliamentarians throughout-of-school education programmes in containing population growth. Every Community Education Centre will make intensive house to house campaign to persuade people to accept a small family norm so that India's population growth by the end of century is contained at one per cent instead of 2.4 per cent at present.

The most important resolution passed was to work for social awakening to raise the marriage age to 25 years for both boys and girls as a measure of population education.

Training in computer use for teachers

About 750 school teachers are now undergoing a three-week training in Computer education at 17 centres in different regions in the country. This training is a part of the programme of launching computer literacy and studies in schools in the country.

Eight teachers and teacher educators from Britain are assisting in the programme of teacher training. Also 170 BBC micro computer systems have arrived.

The project of computer literacy and studies in schools will ultimately put 1000 micros and a range of software from Britain in 250 selected higher secondary schools in the country.

Inaugurating the Computer Literacy and Studies in Schools (Project CLASS), School Teachers Training Programme, conducted by the University Computer Centre of Osmania University, Mrs. Sathi Nair, Special Secretary, Education, said Computer Education was being introduced all over the country in a planned way by the Government. She said use of Computer at High Schools would help the youngsters to face the challenges of technology of the future. She said Computer teaching and use should be integrated to our needs and requirements.

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, who presided, asked the school teachers to make the best use of training. He said sufficient books and literature was available on computer teaching in schools.

Prof. D.V.R. Vithal, Director of the Programme, said change of attitudes was necessary for transformation from traditional to modern technology. He said a one-year Diploma Course in Computer applications will be introduced from this year. He said ten schools were selected from Andhra Pradesh for Project CLASS out of 250 selected schools in the country. He said by 1990, two lakh schools will be offering Computer Education.

USEFI-Sponsored workshop

The USEFI-sponsored workshop on "Change and Continuity in American History and Politics" was held under the auspices of the Department of Political Science, Annamalai University, Annamalainagar, from 21st May to 3rd June 1984. The workshop designed to up-date the knowledge of teachers in American history and politics was inaugurated by Sharada Nayak, Director, USEFI, New Delhi. Nearly 25 college and university teachers from various parts of India participated in the programme.

The workshop consisted of lectures, discussions and paper presentation programmes. Dr. S. Bhaskaran who served as the Academic Director of the workshop referred to the following interesting and useful topics discussed at the workshop: "Elections in America," "Public Interest Litigation in India and the US," "Role of Cities in Politics," "Martin Luther King and After," "Role of Mass Media in the American Political Process," "Women's Movement in the US," "Indo-US Relations in the Pre and Post Independence Periods," "American Film and History."

Delivering the valedictory address Prof. S.V. Chittibabu, Vice-Chancellor, Annamalai University, highlighted the need for updating the knowledge of teachers, actually teaching these subjects.

Common Act likely for Varsities in Rajasthan

At a meeting convened recently at Mount Abu by the Governor of Rajasthan, the Vice-Chancellors of Rajasthan University, J.N. Vyas University (Jodhpur) and Sukhadia University (Udaipur), it is reported, have considered the draft of a proposed Common Act for the three Universities. The proposed Act is likely to provide for common service conditions of teaching and non-teaching staff. It is likely to redefine the procedure for selection of teachers, affiliation of colleges and constitution of different academic bodies as also give more powers to the Vice-Chancellor.

Limit on stay of students in Varsities

The Union Ministry of Education and Culture, it is reported, has suggested to the Universities that it would be preferable to set a limit for the period for which a student can remain on the rolls of a University or a College. Such a limit, it has been suggested, may also be set for a student to remain in a hostel. This move, it is felt, would enable universities to remove some of the anti social elements from the universities and colleges and also enable freshers to secure hostel accommodation.

New Science Faculty for South Delhi Campus

Five new postgraduate departments under a new "Faculty of Inter-disciplinary and Applied Sciences" in the South Campus of the Delhi University will be opened in July. The initial cost will be over Rs 1 crore. The new Science Faculty is expected to give a boost to studies in frontier areas of science and research.

M.Sc. Courses in bio-chemistry, microbiology, genetics and environmental biology besides MSc./P.G. Diploma in Electronic Science and MSc/MPhil in biophysics would be started in these new departments.

The number of students to be admitted would be kept at the minimum level initially. Course coordinators have been appointed for these courses.

Rotation of headship at AMU

The Aligarh Muslim University has introduced the system of rotation of Headship of Departments. This decision has been taken by the Vice-Chancellor of the University on the recommendation of the Executive Council of the University.

Under the new system the seniormost Professor or Reader, as the case may be, will be appointed as Head of the Department for a period of five years.

Honours courses through correspondence study at PU

The Patna University has decided to introduce Honours teaching through Correspondence Courses. This decision is reported to have been taken at a meeting of the Principals held recently under the Presidentship of the Vice-Chancellor of the University, Dr. G.P. Sinha.

New course at KU

The Kurukshetra University has introduced a new Master's Course in Computer Applications. The Course is of two years duration after graduation with Mathematics or Statistics.

Admission to B Ed, Ayurvedic courses at MDU

Maharshi Dayanand University, Rohtak has decided to centralise admissions to BEd. and Ayurvedic Courses.

An Overseer Training (OT) Course would be started this year at the University.

UNIVERSITY NEWS

University News is published weekly by the Association of Indian Universities to promote awareness of contemporary thinking on higher education. Views expressed in the journal are those of the authors and do not reflect the policies of the Association.

Articles are invited by the Editor on matters relating to University education. Manuscripts (in duplicate) should be sent to the Editor, University News, Association of Indian Universities, AIU House, 16 Kotla Marg, New Delhi-110002. They should be typed on one side of the paper, double spaced with wide margins. Each article should be accompanied by a summary/abstract of 100/150 words on a separate sheet.

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Seminar on computer aided design at DEI

An all India Seminar on Computer Aided Design will be held on January 11th and 12th, 1985, at the Faculty of Engineering of the Dayalbagh Educational Institute. Scientists and Engineers working in this area in Universities and industries, are invited to present papers relating to the original research work done by them in various aspects of this emerging field.

The abstract of paper may be sent to Professor D.A. Swarup, Dean, Faculty of Engineering by 15th September 1984, and the complete text by Nov. 1, 1984. The papers may be accepted for presentation or poster display.

Highlights from Cochin Varsity's budget for 1984-85

Provisions have been made in the budget of the Cochin University for the year 1984-85 for the following :

- **Establishment of Department/ Centre**
  - (i) Department of Computer Science
  - (ii) Computer Centre
- **New Specialised Courses**
  - (i) M. Tech degree course in Computer and Information Sciences.
  - (ii) Postgraduate Diploma Course in Environmental Studies.
  - (iii) M. Sc. degree in Environmental Studies (by Research)
  - (iv) Integrated M. Tech degree Course in Construction Management.
- **New Centres to be Developed**
  - (i) Centre for Microprocessor Research for promoting research and development in emerging areas in Electronics.
  - (ii) Nodal Centre for National Manpower Information System—for storage, up-dating, retrieval and analysis of manpower information to assist technical education planning in the country with full financial support from Government of India.
  - (iii) Centre for Sponsored research & Consultancy to establish liaison with industrial and other organisations and to render services to their developmental needs.
  - (iv) State Level Training Centre for Services for providing training to educated youth with the objective of widening their employment and career opportunities with full financial support from the State Government.
  - (v) Centre for Information Sciences to prepare system analysis, system designers, application programmer, data base administrators, information retrieval specialists and communication system specialists.
  - (vi) Proposals are also there to upgrade the level of the University Services and Instrumentation Centre.

Cochin Varsity's Marine Science Department re-organised

As proposed by the University Grants Commission, the Cochin University's Department of Marine Science has been reorganised into the School of Marine Science with four divisions, as mentioned below, endowed with sufficient freedom in academic matters : (1) Physical Oceanography and Meteorology; (2) Chemical Oceanography; (3) Marine Geology; and (4) Marine Biology, Microbiology and Bio-Chemistry.

Institute of Animal Genetics at Bangalore

The first Institute of Animal Genetics in the country is expected to be set up at National Dairy Research Institute Complex at Bangalore very soon. The Institute will also have a bureau of animal genetics resources.

A Genetic Engineering Section has already been opened at the Indian Institute of Science, Bangalore. Another laboratory is also expected to be started in the private sector very soon at Bangalore. With the proposed Institute in the NDRI Complex, Bangalore will become a Centre of Genetics Research.

New medical college at Salem

According to reports, a new Medical College is proposed to be started at Salem in Tamil Nadu. A plot of 130 acres of land is readily available at Salem for the College.

New course at Thapar Institute of Engineering and Technology

A five-year B.E. degree Course in Industrial Engineering (design) is proposed to be started from July 1984 at the Thapar Institute of Engineering and Technology, Patiala.

Research project on coastal erosion at Cochin Varsity

The Department of Science & Technology, Government of India has approved a research project entitled "Mathematical Modelling & Analysis of Probelms of Coastal Erosion" under the guidance of Dr. M. Jathavedan, Department of Mathematics & Statistics, at a total cost of Rs. 1,29,200. Dr. A. Krishnamoorthy, Dr. N. Ramanujam (Dept. of Mathematics & Statistics) and Dr. P.G. Kurup (School of Marine Science) are co-investigators.

A 'blue' revolution at Pantnagar

An ambitious programme in fisheries to bring about a 'blue revolution" has been launched by G.B. Pant University of Agriculture & Technology. Among the programmes planned are fisheries, rural management forestry and wild life, agro-meteorology and environmental Sciences.

In collaboration with a number of national and international agencies like ICAR, CSIR, BARC and IDRC, about 200 research projects, it is reported, are under way.

News from Agril. Varsities

Farmers' trips under 'Lab to Land Programme'

With a view to disseminating the modern agricultural technology being developed in the agricultural universities, to the doorsteps of the farming community, the Indian Council of Agricultural Research, New Delhi has launched 'Lab to Land' programme which is being implemented in all the agricultural universities in India. The Konkan Krishi Vidyapeeth also has carried out various activities as a part of this programme. Visits of farmers to the university farms is one of the important activities.

The farmers adopted under 'Lab to Land' programme and the farmers from the development block of the College of Agriculture were taken around the farms of the university. They were also given the information regarding on-going research work in the Department of Horticulture, Agronomy, Botany, Agricultural Engineering and Animal Husbandry and Dairying.

During the period, the farmers also paid a visit to the Central Research Station, Wakavali and took information regarding various crops.

In all 688 men and women farmers from different villages participated in these trips.

Prof. V.G. Patil, Extension Training Officer from the Department of Agricultural Extension planned these trips under the able guidance of Prof. P.S. Sawant. Head, Department of Agricultural Extension.

Biological protection for sugarcane and maize crops

A new product capable of nullifying the effect of the Pyralis pheromone has been synthesized for protecting sugarcane and maize plantations in Africa where these crops are frequently destroyed by the larva of this moth.

This product, a synthesized pheromone was recently developed jointly by researchers of the French National Centre of Scientific Rerearch (CNRS) and the National Institute for Agronomic Research (INRA).

Pheromones are chemical substances produced by an animal and giving rise to specific reactions. They serve as a basis for chemical communication. In the case of the sugarcane pyralis borer, the male produces pheromones composed of two chemicals : a vanillin-based substance and a lactone (Eldanolide) which act as sex attractants for the female. The two sexes are prevented from coming together by substituting synthetic pheromones to the original ones, for the signals generated no longer correspond to the specific stimuli. Till now, sugarcane and maize plantations were highly favourable places of reproduction for the pyralis borer, and application of the new substance will eliminate it for good.

Field trials are now in progress in Africa after the preliminary laboratory experiments. The application of the same techniques for controlling another pest, the pink bollworm has already shown positive results in the United States.

All India co-ordinated research project at KKV

The Indian Council of Agricultural Research, New Delhi sanctioned an All India Co-ordinated Research Project on Post-harvest Technology of Horticultural Crops' for the Konkan Krishi Vidyapeeth. The University has started the functioning of this scheme and at present the research on mango and banana has been taken up. A provision of Rs. 8.47 lacs has been made and various apparatus are being made available for the research work.

News from Abroad

Bilingual education system for Brunei

BRUNEI plans to begin a gradual change to a bilingual education system by next year, with total implementation effective in 1988, according to the Borneo Bulletin.

Malay-medium and English-medium schools will be replaced by a dual Malay-English system. Education and Health Minister, Pehin Dato Haji Abdul Aziz, said that the policy change was made to give Brunei students more chance of being accepted into English-medium higher education institution abroad.

The Acting Education Director Awang Razak bin Haji Mohammad, making the policy announcement to primary school heads, stressed that there would be no decrease in Malay language.

"Our children will continue to master Malay as their mother tongue. Our aim is to make every child in Brunei speak Malay and English equally well," he added.

More research funds for NUS

According to its third annual report of the National University of Singapore (NUS), for the academic year July 1982—July 1983, a total of 141 research projects were funded by the $3.9m that came in research funds. NUS was able to place more emphasis on its research activities last year as it received more funds to support studies essential to the high technology and knowledge-intensive industries in Singapore.

The Research Scholarship Scheme has been revamped in a bid to boost the post-graduate population to at least 10 per cent of the total undergraduate enrolment.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

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A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

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2. Mangalath, Priyadas G. *A study of the influence of literature on journalism.* U Ker, Trivandrum. Dr. J.V. Vilanilam.

3. Syed Amjed Ahamed. *Influence on the new world information order debate on international news coverage: A longitudinal content analytical study of Indian newspapers.* U Ker, Trivandrum. Dr. J.V. Vilanilam.

4. Vijayakumar, M. *Audience perception of the socio-economic and political relevance of Malayalam movies of the seventies and early eighties: A survey of film society members and non-members.* U Ker, Trivandrum. Dr. J.V. Vilanilam.

Sociology

1. Gupta, Rakesh. *Agrarian relations.* BHU, Varanasi Prof. S. Tripathi.

Economics

1. Shukla, Anjana. *Devi Ahilya Vishwavidyalaya mein uchch shiksha ka lagat labh vishleshan.* Devi Ahilya, Indore. Dr. (Smt.) S. Mahalati.

Education

1. Chugh, Narinder. *Moral education: Its concept, dimensions and implications for secondary school curriculum.* Pb U, Chandigarh. Dr. S.S. Mathur.

2. Dutta, Rajni. *Effect of different portage training intervention models on motor development of pre-school mentally retarded children.* Pb U, Chandigarh. Dr. (Mrs.) Tehal Kohli.

3. Karmacharya, Uttam Krishna. *A study into the modernization of education as perceived by selected educational specialists in Nepal.* Pb U, Chandigarh. Dr. N.N. Pangotra.

4. Mehra, Vandana. *Effectiveness of integrated system of instruction for concept and principle learning in different classroom climates at secondary level.* Pb U, Chandigarh. Dr. Anand Bhushan.

5. Prabha. *Role structure of teacher's relation to modernization : A study of teachers in colleges affiliated to Panjab University.* Pb U, Chandigarh. Dr. N.N. Pangotra.

6. Pradhan, Kedar Man. *A study of the women's affairs training programme: A strategy for rural development in Nepal.* Pb U, Chandigarh. Dr. (Mrs.) Asha Sethi.

7. Pradhananga, Gajendra Bahadur. *Evaluative study of elementary teacher education curriculum of Nepal.* Pb U, Chandigarh. Dr. Anand Bhushan.

8. Sethi, Amrit. *To study the effectiveness of micro-teaching for developing teaching skills among secondary school teachers.* Pb, U, Chandigarh. Dr. G.C. Sodhi.

9. Shabbir Ahmed. *Efficacy of teaching designs in achievement and acquisition of process skills as related to intelligence and extraversion.* Pb U, Chandigarh. Dr. G.S. Sodhi.

10. Sookmauno, Phramhu Teeraponch. *A comparative study of the perception of problems by the administration of formal and non-formal educational institutions at the secondary state in Bangkok Area of Thailand.* Pb U, Chandigarh. Dr. Harish Sharma.

Commerce

1. Raich, R.N. *Organisational buying behaviour: A study of buying behaviour of small scale industrial organisations in Satara City.* Shivaji U, Kolhapur. Dr. V.K. Amte.

2. Sanjiv Kumar. *Socio-economic development of backward classes: A study of the role played by financial and non-financial agencies in the State of Haryana. MDU,* Rohtak. Dr. O.P. Goyal.

3. Srivastava, Shashi Kumar. *An appraisal of Unit Trust of India. BHU,* Varanasi. Prof. S.N. Mehrotra.

Business Management

1. Khurana, Veena. *Determinants of corporate health: Management audit approach.* MDU, Rohtak. Dr. R.D. Pathak.

HUMANITIES

Philosophy

1. Lal, Raj Kumar. *Contemporary European philosophy.* BHU, Varanasi. Dr. C.P.M. Namboodiry.

2. Pandey, Sudha. *Saundarya shastra ke vishaya mein Katya ke vicharon ka adhyayan.* BHU, Varanasi. Dr. R.N. Mukherjee.

3. Pandey, Vishnu Datta. *Gita ke vishay mein Hegal ke vicharon ka adhyayan.* BHU, Varanasi. Dr R.N. Mukherjee.

4. Singh, Bijai Pratap. *Mayavad ke vishaya mein Ramanuja ka siddhant.* BHU, Varanasi. Dr. R.N. Mukherjee.

5. Singh, Dinesh. *Catus-sutri vedanta.* BHU, Varanasi. Dr. B.L. Mishra.

6. Singh, Jai Prakash. *Mahaprabhu Ballabhacharya ke pithon kee parampara ka adhyayan.* BHU, Varanasi. Dr. B.L. Mishra.

7. Singh, Meera. *Vaibhashik aur sautantrik sampradaya mein vinay: Ek tulnatmak adhyayan.* BHU, Varanasi. Prof. Rudra Jha and Dr. B.N. Singh.

8. Srivastava, Mamta Rani. *Nature of religious consciousness.* BHU, Varanasi. Prof. L.N. Sharma.

9. Yadava, Ashok Kumar. *The critical study of Carak samhita and sankhya philosophy.* BHU, Varanasi. Dr. L.P. Gupta and Dr. B.N. Singh.

Fine Arts

1. Chalam, Vijay. *Monumental sculpture in relationship commemorative concept of visual culture throughout the age upto modern functions.* BHU, Varanasi. Shri Balbir Singh Katt.

2. Giri, Karuna. *Modhera ka Surya Mandir.* BHU, Varanasi. Prof. Anand Krishna.

3. Laxmi Narayan. *Sangrahalaya aur shiksha.* BHU, Varanasi. Prof. N.R. Banerjee and Dr. Kalyan Krishna.

4. Singh, Akhand Pratap. *Arambhik Bharatiya kala mein samnavyatmak pratimayen.* BHU, Varanasi. Dr. T.K. Biswas.

Language & Literature

English

1. Ajit Kumar, M. *Image of India in the novels of Paul Scott.* U Ker, Trivandrum. Dr. K. Radha.

2. Bhatnagar, Nitin. *A psychological study of man woman relationship in the plays of Eugene O'Neill.* Devi Ahilya, Indore. Dr. S.S. Chandel.

3. Ingle, Pravin. *The philosophy of stoicism in the novels of Hemingway.* Devi Ahilya, Indore. Dr. S.S. Chandel.

4. Kasbekar, Sushma. *Inter-action of characters and plots in the plays of the Tennessee Williams.* Devi Ahilya, Indore. Dr. S.S. Chandel.

5. Kulkarni, P.A. *Themes and techniques in William Golding's novels.* Shivaji U, Kolhapur. Dr. V.V. Badava.

6. Mirajkhr, A.R. *Themes and techniques in the poetry of Philip Larkin.* Shivaji U, Kolhapur. Dr. S.R. Suryavanshi.

7. Purohit, Sudha. *Sense of alienation in Nathaniel Hawthorne's writings.* Devi Ahilya, Indore. Dr. R.C. Oza.

8. Raghuvanshi, Rashmi. *The dramatic art of Arthur Miller.* Devi Ahilya, Indore. Prof. R.N. Sharma.

9. Sambre, Manik. *Vision and Design in the novels of Hemingway.* Devi Ahilya, Indore. Prof. R.N. Sharma.

10. Saxena, Alok Kumar. *Themes and techniques in the works of Jack London (The Worth Land Saga).* Devi Ahilya, Indore. Dr. S.S. Chandel.

11. Shukla, Veena. *Imagery of sight and motion in the poetry of Emily Dickinson.* Devi Ahilya, Indore. Dr. S.S. Chandel.

Sanskrit

1. Babu, Shyam. *Jain Kumar Sambhava evam Kalidasiya Kumarasambhava: Ek tulnatmak adhyayan.* BHU, Varanasi. Dr. Jagdish Chandra Shastri and Dr. R.P. Dwivedi.

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9. Neelam Kumari. *A comparative study of the Candra and Paninian grammar.* MDU, Rohtak. Dr. Jai Dev Vidyalankar.

10. Pandey, Om Prakash. *Prachin Bharatiya evam adhunik shikshan paddhati: Ek punarmulyankan.* BHU, Varanasi. Prof. V.K. Varma.

11. Radhika Devi. *Sukla yajurveda mein chitrit samaj.* BHU, Varanasi. Dr. Sitaram Shastri, and Dr. K.P. Singh.

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16. Tripathi, Ravindra Nath. *Rigveda ke pancham mandala ka sanskritik tatha ayurvedic adhyayan.* BHU, Varanasi. Dr. J. Mitra and Prof. V.K. Varma.

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Hindi

1. Arun Kumar. *Badalate samajik mulya aur sathottari hindi kahani.* BHU, Varanasi. Prof. Tribhuwan Singh.

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43. Singh, Sachchidanand. *Reetikaleen shringarik kaviyon kee sagun bhakti ka swarup*. BHU, Varanasi. Dr. S.S. Shukla.

44. Singh, Swarn Lata. *Pt. Mahamana ka hindi mein yogdan*. BHU, Varanasi. Dr. S.N. Dwivedi.

45. Singh, Umesh Prasad. *Badalata huya samajik parivesh aur swatantrayottar hindi upanyas*. BHU, Varanasi. Dr. S.P. Singh.

46. Srivastava, Dayawanti. *Nirala kavya mein aprastut, pratik, rupak aur bimb vidhan*. BHU, Varanasi. Dr. R.N. Verma.

47. Srivastava, Poonam. *Nand Das kee bhasha*. BHU, Varanasi. Dr. Raj Mani Sharma.

48. Srivastava, Shyamji. *Samajik parivartan kee prakriya aur Ranu ke upanyas*. BHU, Varanasi. Dr. Pushpa Agrawal.

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51. Tripathi, Trilokish Narayan. *Nayi kahani: Arth aur abhipraya*. BHU, Varanasi. Dr. Jamilaali Jafari.

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56. Yadava, Shiv Bachan Singh. *Hindi natak: Satavan dashak aur rang manch*. BHU, Varanasi. Dr. Ibha Gupta.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Library Science

1. Ijari, Somaraya Rayappa. *A development plan for public library system in the Karnatak State.* Karnatak U, Dharwad.

Psychology

1. Awasthi, Ishdutta. *Psychological differentiation and problem solving behaviour.* HS Gour, Sagar.

2. Saksena, Kiran. *Construction and standardization of a general mental ability test for 6 to 10 years age group students.* RDV, Jabalpur.

Sociology

1. Dubey, K.C. *The Hill Marias of Bastar.* Bhopal U.

2. Mahendra Prasad. *Balashram kee samajik, arthik pristhbhumi : Varanasi Janpad mein Aurai vikas khand; ek samajvaigyanik adhyayan.* BHU, Varanasi.

Social Anthropology

1. Regmi, Rishikeshab Raj. *Society and economy of Dhimal: An agricultural community of Eastern Nepal.* U Calcutta.

2. Samanta, Dipakkumar. *The dominant weak: A case study of the Neo-Buddhists of Maharashtra.* U, Calcutta.

Political Science

1. Bhaskaran, N.K. *Democratic movement in Travancore.* U Ker, Trivandrum.

2. Biswas, Dhirendramohan. *Social and political ideas of Chittaranjan Das.* U Calcutta.

3. Ghosh, Ratna. *Administrators in West Bengal: Problems in role performance.* U, Calcutta.

4. Lokapur, Iranna Amarappa. *Political ideas of Jayaprakash Narayan.* Kar U, Dharwad.

5. Pathik, R.K. *Jila prashasan mein samajik paryavarn ke prabhav kaushal: Adim Jai Kalyan Vibhag ke udaharanatmak sandarbh mein Jila Raisen, M.P.* **D.Litt** Bhopal U.

6. Prakash Chandra. *Factional politics in Jammu and Kashmir.* JNU, Delhi.

7. Sharma, Jagmohan. *Marx evam Lenin ke darshan ka Bharatiya rajniti per prabhav.* Bhopal U.

8. Upadhyay, Braj Kishore. *Changing pattern of political leadership in Bihar.* Mag U, Bodh Gaya.

9. Verma, Jyoti. *Integrated rural development: Perspectives and prospects.* Mag U, Bodh Gaya.

Economics

1. Baidya, B.P. Raj. *External assistance and economic development: A study of Chinese economic assistance to Nepal,* 1955-1980. BHU, Varanasi.

2. Bhattacharyya, Debendranarayan. *Decision under uncertainty and allocative efficiency.* U Calcutta.

3. Bisht, P.S. *Aayat pratisthapan kee pravrittiyan: Bharat ke niyojit vikas ke sandarbh mein.* Kum U, Nainital.

4. Chhipa, M.L. *A study of regional disparities in commercial banking development in India during* 1960-79. U Raj, Jaipur.

5. Das, Virendra. *Swatantrayoparant Bharat-Nepal arthik sambandh.* BHU, Varanasi.

6. Ninan, K.N. *Economics of Tapioca crop in Kerala State.* U Mysore.

7. Singh, Vimal Shankar. *The Industrial Development Bank of India: A study in development banking.* BHU, Varanasi.

8. Suryanarayana Raju, Sri Kakarlapudi Venkata. *Analysis of productivity levels and economic efficiency in agriculture: A case study of Visakhapatnam District, Andhra Pradesh.* Andhra U, Waltair.

9. Tewari, Deepa. *Kumaun mein bhoomi vyavastha tatha bhoomi sudhar: Swatantrata ke pashchat.* Kum U, Nainital.

Law

1. Sarkar, Bikramkesari. *Legal aspects of land reforms measures in West Bengal.* U Calcutta.

Public Administration

1. Misra, Biswamohan. *Educational administration in Orissa.* Utkal U, Bhubaneswar.

2. Pandit, Jonnalagadda Venkata Kasi Viswanadha. *A comparative study of selection grade municipalities in Andhra Pradesh.* Andhra U, Waltair.

Education

1. Barua, Utpala. *Influence of capacity of memorisation on scholastic achievement.* U Calcutta.

2. Dileep Kumar. *Caste and classes as variables affecting spoken language in primary class children.* BHU, Varanasi.

3. Gupta, I.D. *A study of some factors of environmental press for facilitating creativity in language arts.* Bhopal U.

4. Rawal, V.R. *Personality adjustment and attitude towards authority of emotionally disturbed adolescents in relation to their home and school environments.* Kum U, Nainital.

Commerce

1. Basu, Tapendranath. *Anatomy of probability oriented inventory and its correlation with buying behaviour.* U Calcutta.

2. Bhola, Ravi Kumar. *An appraisal of role of scheduled commercial banks in India in promoting agricultural development,* 1969-81. BHU, Varanasi.

3. Chakraborty, Sankar. *A study of problems and prospects of retail trade of consumer goods in Siliguri, District Darjeeling, North Bengal,* 1977-1980. NBU, Rajarammohunpur.

4. Choudhury, Sunirmal. *Growth of commercial banking of Cachar and its impact on the economy of the district with special reference to nationalised banks.* Gauhati U.

5. Pais, Hilary. *Industrial relations in the coal industry in India.* Gauhati U.

6. Pande, J.N. *Capital formation in Eastern India: A study of corporate sector from* 1969-70 *to* 1978-79. Berhampur U.

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9. Singh, M. Kaoba. *History of Manipur,* 1709 *A.D. to* 1826 *A.D. Mani U, Imphal.*

10. Singh, Surendra Bahadur. *Critical appraisal of the role of commercial banks in rural development of Jaunpur District.* BHU, Varanasi.

Folklore

1. Das, Prabin Chandra. *Hajo: A sociocultural study.* Gauhati U.

Management

1. Munshi, N.M *Personnel management in the units of small scale industries of Saurashtra Region.* Saur U, Rajkot.

2. Singh, Raj Nath. *Management control of Uttar Pradesh State Electricity Board through formulation of key result areas.* BHU, Varanasi.

3. Venkatesh, M. *A study of leadership styles and their effectiveness in decision making: A case study of Government of Karnataka Undertakings.* U, Mysore.

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(b) Consistently good academic record with first or high second class (B in the seven point scale) Master's degree in the relevant subject or an equivalent degree of a foreign University.

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(ii) Experience of teaching in Training College or Department of Education.

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Having regard to the need for developing inter-disciplinary programmes the degrees in (a) and (b) above may be in relevant subject.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a consistently good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research Laboratory/Organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within five years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

FACULTY OF MEDICINE

Professors

Scale of Pay : Rs. 1500-60-1800-100-2000-125/2-2500 plus allowances.

14. Professor of Anatomy, Department of Anatomy.

Qualifications

I. Essential

M.S. (Anatomy), M.B.B.S. with M.Sc. (Anatomy), Ph.D. (Medical Anatomy), D.Sc. (Medical Anatomy)

Teaching/Research Experience

As Reader in Anatomy for four years in a Medical College.

II. Desirable

Should have original research publications in the speciality and be actively engaged in Research and should also possess experience of guiding research at doctoral level.

15. Professor of Ocular Pathology, Department of Ophthalmology.

Qualifications

I. Essential

M.S. (Ophthalmology), M.D. (Ophthalmology), M.D. (Pathology), M.D. (Pathology & Bacteriology) or other equivalent qualifications recognised by the Medical Council of India.

Teaching/Research Experience

As Reader in Pathology/Ophthalmology for four years in a Medical College.

II. Desirable

1. Experience in Opthalmic Pathology preferably in an Ophthalmic Department.

2. Original Research publications in the speciality in Indian and foreign journals.

Readers

Scale of Pay : Rs. 1200-50-1300-60-1900 plus allowances.

16. Reader in Preventive & Social Medicine, Department of Preventive and Social Medicine.

Qualifications

I. Essential

M.D. (Social & Preventive Medicine)/(Community Medicine), M.D. (Medicine) with D.P.H. Other equivalent qualifications recognised by the Medical Council of India.

Teaching/Research Experience

As Lecturer in Social & Preventive Medicine for five years in a Medical College.

II. Desirable

Original research publication in the speciality in Indian and foreign journals.

17. Reader in General Surgery, Department of General Surgery.

Qualifications

I. Essential

M.S. (Surgery)/M.S. (General Surgery) or M.S. (Paediatric Surgery) or equivalent qualifications recognised by the Medical Council of India.

Teaching/Research Experience

As Lecturer in Surgery, Paediatrics Surgery for five years in a Medical College.

18. Reader in Nephrology, Department of Medicine

Qualifications

I. Essential

D.M. (Nephrology), M.D. in Medicine with two years special training in Nephrology.

Teaching/Research Experience

As Lecturer in Nephrology for five years in a Medical College.

II. Desirable

Published research work in the speciality.

19. Readers in E.N.T., Department of Oto-Rhino Laryngology

Qualifications

I. Essential

M.S. (Oto-Rhino-Laryngology)/Other equivalent qualifications recognised by the Medical Council of India.

Teaching/Research Experience

As Lecturer in Oto-Rhino-Laryngology for five years in a Medical College.

II. Desirable

1. Original research publications in the speciality in Indian and foreign journals.

2. Aptitude for Broncho-Oesophagology/Rhinology and Laryngology.

20. Reader in Physiology, Department of Physiology

Qualifications

I. Essential

M.D. (Physiology), M.B.B.S. with M.Sc. (Physiology), Ph.D. (Medical Physiology), D.Sc. (Medical Physiology). Other equivalent qualifications recognised by the M.C.I.

Teaching/Research Experience

As Lecturer in Physiology for five years in a Medical College.

II. Desirable

Original research publications in the speciality in Indian and foreign journals.

Lecturers

Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances.

21. Lecturer-cum-Paediatric Surgeon, Department of Paediatrics.

Qualifications

I. Essenatial

M.Ch. (Paediatric Surgery)

II. Desirable

Published research work in the speciality.

22. Lecturer in Bio-Chemistry, Department of Bio-Chemistry

Qualifications

M.D. (Bio-Chemistry), M.B.B.S. with M.Sc. (Medical Bio-Chemistry), Ph.D. (Medical Bio-Chemistry), D.Sc. (Medical Bio-Chemistry).

Note : The selected candidates will be responsible for Organising Clinical Bio-Chemistry Section as well as for conducting courses in Medical Bio-Chemistry for M.B.B.S. and M.D. Classes.

FACULTY OF ENGINEERING & TECHNOLOGY

Professors

Scale of Pay : Rs. 1500-60-1800-100-2000-125/2-2500 plus allowances.

23. Professor of Mechanical Engineering, Department of Mechanical Engineering.

Qualifications

I. Essential

1. An eminent scholar with published work of high quality actively engaged in research. Ten years experience of teaching and/or research. Experience of guiding research at Doctoral level.

OR

An outstanding Engineer/Technologist with established reputation who has made significant contribution to knowledge.

2. Should have specialised in Combustion Engineering.

II. Desirable

Experience of teaching to post-graduate classes.

24. Professor of Physics, Physics Section, Z.H. College of Engineering & Technology.

Qualifications

A first or a high second class Master's degree in Physics of an Indian

University or an equivalent qualification. Ordinarily a research degree of Doctorate standard or published work of a high standard. Ordinarily 10 years experience of post-graduate teaching or guiding research or of teaching degree classes in Engineering.

25. Professor of Chemical Engineering, Department of Chemical Engineering.

Qualifications

I. Essential

An eminent scholar with published work of high quality actively engaged in research. Ten years experience of teaching and/or research. Experience of guiding research at Doctoral level.

OR

An outstanding Engineer/technologist with established reputation who has made significant contribution to knowledge.

II. Desirable

(i) Teaching experience in Institution of University level.

(ii) Experience of guiding research at Doctoral level.

Field of Specialisation

Transport Phenomena and Analysis/Mathematical Modelling and plant simulation/Fluid Mechanics/Mass transfer/Chemical Reaction Engineering/Petroleum Processing and Technology/Chemical Engg. Thermodynamics.

To be specialised in at least two of the above.

Readers

Scale of Pay : Rs. 1200-50-1300-60-1900 plus allowances.

26. Readers in Chemical Engineering, Department of Chemical Engineering

Qualifications

I. Essential

Good academic record with a Doctor's degree in a relevant field. About five years experience of teaching and/or research and development.

Provided further that candidates not possessing Ph.D. may be considered if they have to their credit equivalent research published work or design/development work of a high order either in the Instiution or in an Industry.

OR

In the case of persons to be recruited from Industry or professional fields, candidate should possess good academic record with recognised professional work of about seven years which should include innovation and/or research and development.

II. Desirable

Specialisation in Fluid Mechanics/Heat Transfer/Mass Transfer/Reaction Engineering/Transport Phenomena/Petroleum Technology.

To be specialised in at least two of the above.

Lecturers

Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances.

27. Lecturers in Chemical Engineering, Department of Chemical Engineering.

28. Lecturer in Civil Engineering, Department of Civil Engineering (Temporary).

Qualifications

I. Essential

(a) Master's degree in appropriate field in Engineering/Technology.

(b) Consistently good academic record with a Bachelor's degree in Engineering/Technology. First class at Bachelor's degree and/or Master's degree level.

(c) One year's relevant professional experience outside academic/research Institutions.

Having regard to the requirements of emerging fields of Engineering/Tech. and of developing inter-disciplinary programmes the requirements of Engineering/Technology degrees may be waived in the cases of otherwise well qualified candidates.

Provided further that if a candidate does not possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of five years of his appointment failing which he will not be able to earn future increments, until he fulfils this requirement.

If the candidates with M.Tech./M.E. qualifications are not available or not found suitable for appointment the essential qualifications may be relaxed and first class Engineering Graduates may be appointed subject to the condition that the candidate concerned shall have to obtain the M.Tech./M.E. degree within a period of five years failing which he will not be able to earn future increments until he acquires the prescribed qualifications.

II. Desirable: For post No. 27, Lecturers in Chemical Engineering.

Field of specialization: Any two of the following broad areas:

1. Fuel Technology.
2. Chemical Technology.
3. Transport Phenomena/Transfer Operations.
4. Chemical Engineering Design.

Higher initial start may be given to candidates possessing exceptional qualifications and experience. Candidates interviewed may be paid contribution towards their T.A. equal to one single second class Railway fare only.

Prescribed application forms and instructions may be had from the Assistant Registrar (Selection Committees) Registrar's Office, A.M.U., Aligarh on payment of Rs. 5/- in cash (to be deposited in the Cash Section, Finance Office, A.M.U., Aligarh) or through an Indian Postal Order payable to the Finance Officer, A.M.U., Aligarh either personally or by sending a self-addressed stamped envelope of 23× 10 cm. **Last date for receipt of applications is 15th July, 1984 (during office hours). Incomplete applications and those received late will not be considered.** All applications from outside Aligarh should be sent by Registered post addressed by name to Dr. H.A.S. Jafri, Secretary to the Vice-Chancellor, Aligarh Muslim University, Aligarh.

NOTE : **Suitable persons may be kept on Panel for future appointment.**

Zamir Ahmed Khan
REGISTRAR

JADAVPUR UNIVERSITY

CALCUTTA-700 032

Employment Notification No. A2/C/8/84

Dated : June 13, 1984

The University invites applications in the prescribed form for the following posts:—

1. (a) Professor of Philosophy-Two posts
   (b) Professor of Bio-Engineering - One post
2. Lecturer in Food Technology & Biochemical Engineering : One post.

Qualifications for the Posts of Professor Essential

An eminent scholar with published work of high quality actively engaged in research. Ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding Engineer/Technologist with established reputation who has made significant contribution to knowledge.

Desirable

For Post 1(a) : Knowledge of Sociology/Social Jurisprudence/Social Anthropology/Social Psychology.

For Post 1(b) : (i) Experience of teaching at University level.

(ii) Experience of organising laboratories/implementing R&D Schemes/execution of projects in the relevant field from a position of responsibility.

(iii) Corporate membership in recognised professional bodies.

Specialisation

For post 1(a) : (i) One post is open.

(ii) One post in Social Philosophy with such specifications as under desirable column.

For post 1(b): Bio-Medical Engineering/Bio-mechanics/Bio-electronics/Bio-instrumentation/Bio-kinetics/Bio-materials.

Qualifications for Lecturer Post: Essential

(i) Master's degree in Food Technology & Biochemical Engineering/Chemical Engineering/allied subjects.

(ii) Good academic record with a Bachelor's degree in Engineering/Technology. First Class at Bachelor's degree and/or Master's degree level;

(iii) One year's relevant professional experience outside academic/research institutions.

Having regard to the requirements of emerging fields of Engineering and of developing interdisciplinary programmes, the requirements of Engineering/Technology degrees may be waived in the cases of otherwise well qualified candidates.

Provided further that if a candidate does not possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of eight years of his appointment failing which he will not be able to earn future increments, until he/she fulfils these requirements.

Wherever candidates with M.Tech./M.E. qualifications are not available or M.Tech./M.E. candidates are not found suitable for appointment, the essential qualifications may be relaxed and the institutions may appoint First Class Engineering Graduates against the post of Lecturers. Such relaxation will, however, be subject to the condition that the candidates concerned shall have to obtain the M.Tech./M.E. degree within a period of five years. Those candidates who fail to obtain the M.Tech./M.E. degree within the stipulated period of five years shall not be entitled for drawing their increments due unless they acquire the prescribed qualification.

Definition of the term 'good academic record' for the 'posts of Lecturer

(i) A candidate holding a Ph.D. degree should possess at least a Second Class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high Second Class Master's degree and Second Class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

Desirable

Two years experience in research/industrial preferably in the field of energy utilisation or project engineering.

Scale of Pay

Professor : Rs. 1500-60-1800-100-2000-125/2-2500/.

Lecturer : Rs. 700-40-1100-50-1600/-.

Last date of receiving applications is **July 10, 1984.**

Application forms are obtainable from the University office during working hours on payment of Rs. 2/- or on payment of Rs. 3/- inclusive of postal charge. Higher initial salary may be given to really deserving candidates. Those who are in employment should submit their applications through proper channel. Choice of the Appointment Committee will not necessarily be confined to applicants only. Canvassing in any form will disqualify a candidate. No travelling allowance is admissible to the candidates called for interview.

REGISTRAR

INDIAN INSTITUTE OF SCIENCE

BANGALORE-560 012

Advertisement No. R(IA)308-19/84

Dated : 19th June, 1984

Applications in the prescribed form are invited for the post of ASSISTANT PROFESSOR (one post) in the Instrumentation Services Unit at the Institute, in the grade Rs. 1200-50-1300-60-1900 plus allowances at Central Government rates prevailing at the Institute from time to time. Emoluments at the minimum of the scale total to Rs. 2435/- per month excluding House Rent Allowance (HRA maximum payable is 15% of pay limited to Rs. 400/- subject to the employee meeting upto 10% of pay or on a flat rate of Rs. 159.75 p.m.)

Qualifications and Experience

Essential

Ph.D. in Science/Engineering/Technology with at least 5 years of R&D experience in the Instrumentation.

Desirable

Professional experience in the areas of electronics, thermal, analytical or other aspects of instrumentation.

Job Description

The candidate is expected to take an active part in the R&D and teaching programmes in these areas in addition to providing assistance/collaboration help to other workers in the Institute.

Relaxation

The stipulation regarding qualifications and the number of years of relevant experience is relaxable at the discretion of the competent authority in the case of candidates possessing exceptionally good record and outstanding capabilities.

Tenure of Appointment

Normally, all new appointments at the Institute are made on contract for periods of five years including an initial probationary period of one year. If, at the end of the first contract, the work and progress of the candidate is found satisfactory, the Institute may consider offering a continuing appointment till the age of superannuation, i.e. 60 years.

General

Application forms (six copies) can be obtained from the Registrar, Indian Institute of Science, Bangalore 560 012, on requisition. Each request for application forms should be accompanied by a crossed Indian Postal Order for Rs. 5/- (non-refundable) made payable to the Registrar, together with a self-addressed stamped (Rs. 3.30) envelope of the size of 28× 18 cms. The payment of application fee is exempted in the case of candidates belonging to Scheduled Castes/Scheduled Tribes on production of certificate from a competent authority.

The last dates are:

(a) For issue of application forms : **20th July 1984**

(b) For receipt of completed application forms : **10th August 1984**.

Applicants in the service of Government, quasi-Government, Government-aided or similar institutions should apply through proper channel. Otherwise, their applications will not be considered.

It shall be open to the Selection Committee for a higher post to recommend a person for a lower post if a suitable candidate for the higher post is not available. (Lecturer or Scientific Officer depending on the qualifications and experience).

Due consideration will be given to candidates who are physically handicapped provided they are academically/scientifically sound and well qualified and generally comparable to others.

Higher starting salary may be considered to candidates with exceptional merit.

Kindly quote the advertisement No. and date in all correspondence. Candidates should ensure that applications are complete in all respects.

Detailed terms and conditions of appointment will be supplied along with the application forms.

T. Nanjunda Rao
REGISTRAR

CALCUTTA UNIVERSITY

Senate House, Calcutta-73

Dated : 15th June 1984

Applications are invited for the post of whole time Lecturers, Readers and Professors in the grade of Rs. 700-40-1100-50-1600 and Rs. 1200-50-1300-60-1900 and Rs. 1500-60-1800-100-2000-125/2-2500 respectively in the following departments of the University's Post-graduate Centre at Agartala.

(a) One Professor and one Lecturer in Sanskrit, (b) one Professor and one Reader in History; (c) one Professor and one Reader in Mathematics; (d) one Reader in Bengali.

N.B. This appointment is specifically meant for the Post-graduate Centre at Agartala and subject to terms and conditions operative at the centre. This service is not of the Calcutta University and cannot be claimed to be transferred or absorbed to the services of Calcutta University at Calcutta in future.

Qualifications for Professor, Reader and Lecturer :

Professor

An eminent scholar with published work of high quality actively engaged in research. Ten years' experience of teaching and/or research. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Reader

Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that at least three of these years were as Lecturer or in an equivalent position.

The condition may be relaxed in the case of candidates with outstanding research work.

Lecturer

(a) A Doctorate degree or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing inter-disciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M.Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment failing which he will not be able to earn future increment until he fulfils these requirements.

The selected candidates will be presced on probation for one year which may be waived in exceptional cases. The appointment shall be subject to the rules laid down or to be laid down for the teachers from time to time.

Applications (seven copies) in prescribed form (obtainable from the University Sales Counter on payment of Rs. 10/- or in case by post on sending a self-addressed 75 paise stamped envelope of 27cm × 13 cm size with a crossed I.P.O. of Rs. 10/- in the name of Calcutta University) should reach the undersigned not later than the **31st July, 1984.**

The choice of the Selection Committee may not necessarily be confined to those who apply.

S.N. Ghosh
REGISTRAR

RANI DURGAVATI VISHWAVIDYALAYA
JABALPUR
Advertisement

Applications are invited on the prescribed application forms for one permanent post of Professor of Law on or before **12-7-1984.**

The minimum essential qualifications and scale of pay for this post are exactly those that are prescribed by the University Grants Commission. The prescribed application forms (in 8 copies) together with the details may be obtained by sending a postal order of Rs. 5/- in the name of the undersigned. The candidates who desire to get the application forms by Registered post should send an additional amount of Rs. 5/- by Postal Order for postal expenses. It should be clearly mentioned on the envelope in bold letter the name of the post applied for.

The University reserves the right not to fill up the post without assigning any reason.

R.N. Tripathi
REGISTRAR

RECENT RELEASE FROM BUTTERWORTHS

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THE UNIVERSITY OF JODHPUR

(Establishment Section)

JODHPUR

ADVERTISEMENT NO. 41/84

No. JDR/U/Estt/6192 **Dated 21 June, 1984**

Applications are invited on the prescribed form for the following posts so as to reach the office of the undersigned latest **31 July 1984**. The application form can be obtained from this office on payment of Rs. 5/- (five) only through I.P.O. payable to the Registrar, University of Jodhpur, at Jodhpur along with a self-addressed envelope of 24× 11 cms size bearing postal stamps of Rs. 4.35.

S. No.	Department	Permanent			Plan			Leave Vacancy
		Prof.	Associate Prof.	Asstt. Prof.	Prof.	Associate Prof.	Asstt Prof.	Asstt. Prof.
1.	English	—	one	two	one	one	—	one
2.	Hindi	one	one	seven	—	one	—	—
3.	Sanskrit	—	one	—	—	one	—	—
4.	Rajasthani	—	—	—	—	two	one	—
5.	History	one	one	one	—	one	—	—
6.	Geography	one	—	three	—	one	—	—
7.	Economics	one	one	one	one	one	—	two
8.	Political Science	—	—	—	—	one	one	—
9.	Sociology	—	—	—	—	one	—	—
10.	Philosophy	one	one	one	—	one	—	—
11.	Psychology	—	—	one	—	one	four	one
12.	Home Science	—	—	—	—	—	—	one
13.	Music	—	—	one	—	—	two	—
14.	Mathematics	—	—	—	one	three	—	four
15.	Physics	—	one	—	one	one	—	—
16.	Chemistry	—	one	two	one	two	—	five
17.	Botany	—	—	three	—	—	one	two
18.	Zoology	one	—	—	one	—	—	—
19.	Geology	—	—	one	—	—	—	—
20.	Commerce	one	two	—	one	two	two	one
21.	Law	one	two	three	—	one	—	one
22.	Civil Engg.	—	—	—	—	—	—	three
23.	Electrical Engg.	—	—	—	—	—	three	two
24.	Electronics & Commn. Engg.	—	—	one	one	two	three	three
25.	Mechanical Engg.	—	one (Workshop Supdt)	one	—	—	—	four
26.	Structural Engg.	one	—	—	—	—	—	three
27.	Mining Engg.	—	—	one	—	—	—	one

Scales of Pay

Professor : Rs. 1500-60-1800-100-2000-125/2-2500

Associate Professor (Reader) : Rs. 1200-50-1300-60-1900

Assistant Professor (Lecturer) : Rs. 700-40-1100-50-1600

Dearness Allowance, House Rent, City Allowance and P.F. will be payable as per University rules.

Note : (1) Details of qualifications will be made available with application form.

(2) The University reserves the right to increase or decrease the number of posts in any subject. The University also reserves the right not to fill up the posts , if deemed necessary.

(3) Preference will be given to qualified and suitable Scheduled Caste/Scheduled Tribe candidates.

(4) Those who had applied for any of the posts indicated above against advertisement Nos. 45/82 dated 14-7-82, 53/82 dated 4-9-82, 64/82 dated 22-10-82, 84/82 dated 27-12-82, 14/83 dated 1-3-83, 26/83 dated 23-4-83 and 29/83 dated 11-5-83 and wish to be considered even now are required to apply again. However, they will not be charged any fee either for application form or application again. While requesting for the application form, they must refer to the advertisement number and the post applied for. The request must be accompanied by a self-addressed stamped envelope of the size 23× 11 cms., bearing postal stamps of Rs. 4.35.

(5) The University may call for interview only limited number of candidates. No TA/DA will be paid to candidates called for interview.

P.S. Bhargava
REGISTRAR

THE GANDHIGRAM RURAL INSTITUTE

(DEEMED UNIVERSITY)

Application for Admission to the undermentioned Courses are invited:

I. M.Phil Courses

1. M.Phil in Micro—Level Planning.
2. M.Phil in Gandhian Thought and Peace Science.

MEDIUM OF INSTRUCTION : ENGLISH

Admission Qualification for Item No. 1

M.A. or M.Sc. in Rural Economics and Extension Education, Rural Sociology and Panchayati Raj, Rural Services, Rural Development, Statistics, Economics, Geography, Sociology, Public Administration, Peace Making, Social Work or allied subjects.

Candidates deputed by Central/State Governments/Planning Agency/Voluntary Agency will be preferred. International candidates with equivalent qualifications may also apply.

DURATION OF THE COURSE : ONE YEAR

Admission Qualifications for Item No. 2

M.A. in Gandhian Thought/M.Sc. in Peace Making/M.A. in Social Science with Diploma in Gandhian Thought, M.A. in Rural Services, Rural Development, Rural Sociology and Panchayati Raj, Rural Economics and Extension Education, Co-operative Management or allied subjects with experience in Gandhian constructive/Peace work. Sponsored candidates from Gandhian Organisations with P.G. Degree may also apply.

DURATION OF THE COURSE: ONE YEAR

II. Post Graduate Courses

1. Two Year M.A. in Rural Development.
2. Two Year M.A. in Rural Economics and Extension Education.
3. Two Year M.A. in Rural Sociology and Panchayati Raj.
4. Two Year M.A. in Co-operative Management.
5. Two Year M.A. in Communicative English (Evening-Course).

MEDIUM OF INSTRUCTION : ENGLISH

Admission Qualification for Item No. 1, 2 and 3.

Graduates with Economics/Sociology/B.Sc., in Rural Development Science/B.A. in Rural Services/Diploma in Rural Services/Political Science, Public Administration in I or II Class are eligible to apply.

Admission Qualification for Item No. 4

Candidates who have passed B.A. in Rural Services/Diploma in Rural Services with Co-operation and Economics as optional subjects/B.A. with Co-operation/B.Com with Co-operation/B.Sc. (Agri.) of other recognised Universities in First or Second Class are eligible to apply.

Admission Qualification for Item No. 5

1. First or Second Class Graduate teachers who are teaching English at the High Schools or Higher Secondary Schools.

2. Graduate in English with a minimum 45% marks in the aggregate.

3. Any graduate who has secured atleast 50% in Part II English.

III. Degree Courses

Three Year B.A./B.Sc. Degree Courses in Rural Services/B.Sc. Degree in Home Science

MEDIUM OF INSTRUCTION : ENGLISH

B.A. (Rural Services)

Optional Subjects

1. Political Science and Sociology.
2. Rural Industries and Management and Economics.

B.Cop. (Bachelor of Co-operation)
B.Sc. Rural Services

Major	Core Science
Mathematics	Physics & Chemistry
Physics	Chemistry & Mathematics
Chemistry	Physics & Mathematics Physics & Biology

B.Sc. Home Science (Only for Ladies)

Candidates who have passed Higher Secondary Course/Pre-University Course/Pre-Degree Course or its equivalent are eligible to apply.

IV. Two year Diploma Course in Agriculture

MEDIUM OF INSTRUCTION : TAMIL

A Pass in Higher Secondary Examination with Biology as one of the subjects or Vocational Course in Agriculture is the Minimum Educational Qualification prescribed for admission.

Candidates who have passed P.U.C./P.D.C. Examinations with Biology as one of the subjects under Part III are also eligible for admission.

Certificate holders of Gandhigram Rural Institute and Shri Ramakrishna Mission Vidyalaya, Coimbatore are eligible for admission into the Second Year of the Diploma Course.

V. One Year Certificate Course for Sanitary Inspector

MEDIUM OF INSTRUCTION : ENGLISH

Candidates who have passed the Higher Secondary Examination of Tamil Nadu or its equivalent having elig for University study with following subject can apply.

Group 'A' (Science and Humanities) under Part IV Biology or Botany or Zoology, with Physics, Chemistry and any one of the following subjects as the fourth subject.

1. Mathematics
2. Environmental Studies
3. Sociology
4. Psychology

OR

Under group 'B' (Vocational Courses), one of the following subjects must be chosen under 'Health''.

1. Medical Laboratory Assistant
2. Dental Hygienist.

The Admission is restricted to candidates who are between 17 to 21 years of age as on 1st July of the year of admission and can be relaxed upto three years in case of S.C. and S.T. candidates.

Admission is open to both men and women candidates for courses I, II, III (for B.Sc. Home Science only ladies), IV, Course V is open only to men. The completed applications should reach the Registrar not later than 10 days after the date of publication of the results of M.A./M.Sc./B.A./B.Sc. Rural Services/Economics/Sociology/ Higher Secondary Examinations/Pre-Degree.

Application forms with Prospectus can be had from the Registrar, Gandhigram Rural Institute, Gandhigram-624302, Madurai District, Tamil Nadu on requisition by sending a Crossed Indian Postal Order or Demand Draft obtained from any one of the Nationalised Banks drawn in favour of the Registrar for Rs. 10/- for Items I and II and Rs. 5/- for Items III, IV and V not dated prior to **20-5-1984** payable to the Registrar, Gandhigram Rural Institute, Gandhigram at Gandhigram Post Office. Along with the requisition for application a self-addressed envelope of the size 26½ cm× 11 cm. with Rs. 1.50 paise stamp affixed should be sent.

The name of the courses for which application is required should clearly be indicated on the top of the self-addressed envelope.

Application forms can also be had from the Institute's Office at Gandhigram between 9.30 a.m. and 4.30 p.m. on all working days on requisition with a Crossed Indian Postal Order or Demand Draft obtained from any one of the Nationalised Banks drawn in favour of the Registrar for Rs. 10/- for Item I and II and Rs. 5/- for Items III, IV and V dated not earlier than **20-5-1984** payable to the Registrar, Gandhigram Rural Institute, Gandhigram at Gahdhigram Post Office.

Dr. T.R. Subramaniam
REGISTRAR

ANNAMALAI UNIVERSITY

ANNAMALAINAGAR

Directorate of Correspondence Courses and Continuing Education

Applications are invited for filling up one post of Director of Correspondence Courses and Continuing Education for the Directorate of Correspondence Courses and Continuing Education. Applications can be had from the undersigned on payment of Rs. 10/- (not refundable) by Cash/Money Order/Postal Order. Applications (with 5 additional copies) should reach the undersigned on or before 5.00 p.m. on **11-7-84.**

Scale of Pay : Rs. 1500-60-1800-100-2000-125/2-2500 with usual allowances.

Qualification

1. Master's Degree with First or High Second Class.

2. Teaching and Administrative experience atleast for 10 years including experience in planning and execution in Universities or institutions of higher learning.

3. Knowledge of printing is essential.

Preferable

Ph.D. Degree

Publications

A higher start in the prescribed scale of pay may be given, keeping in view the experience and other qualifications of the selected candidate.

AR. Lakshmanan
REGISTRAR

AVADH UNIVERSITY

Advt. No. 1/1984

WANTED

A. **Professors** (Temporary) : One each in Physics (Electronics), Mathematics and Statistics, Rural Economics and History & Indian Culture.

B. **Readers** (Temporary) : One each in Physics (Electronics); Mathematics & Statistics; Rural Economics and History & Indian Culture.

C. **Lecturers** (Temporary): One each in Physics (Electronics) ; Mathematics & Statistics; Rural Economics and History & Indian Culture.

Pay Scale

For Professors : Rs. 1500-60-1800-100-2000-125/2-2500
For Readers: Rs. 1200-50-1300-60-1900
For Lecturers: Rs. 700-40-1100-50-1600 plus D.A. etc. according to rules.

Qualifications

A. For Professors

Either

Eminent scholarship with published work of high quality and active engagement in research and ten years experience of teaching or research and experience of guiding research at Doctorate level;

Or

Outstanding scholarship with established reputation for significant contribution to knowledge.

B. For Readers

(i) Good academic record with doctorate degree or equivalent published work, and active engagement in research or innovation in teaching methods or production of teaching materials; and

(ii) Five years experience of teaching or research including atleast three years a lecturer or in an equivalent position:

Provided that the requirement contained in sub-clause (ii) may be relaxed in the case of a candidate, who has outstanding research work to his credit.

C. For Lecturers

1. The following shall be the minimum qualifications for the post of lecturer.

(a) a doctorate degree or research work of an equally high standard in a relevant subject; and

(b) consistently good academic record with first or high second class Master's degree or an equivalent degree of a foreign University in a relevant subject.

2. If the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in sub-clause (B) above.

3. Where in case referred to in clause (1) no candidate possessing doctorate degree or equivalent research work is available or is considered suitable, a person possessing a consistently good academic record (weightage being given to M.Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years or has practical experience in a research laboratory or organisation, on the condition that he obtains a doctorate or gives evidence of research work of equivalent high standard within five years of his appointment failing which he shall not be able to earn future increments until he fulfils the requirements.

4. Clarification of consistently good academic record: a candidate having obtained either an average of 55 percent marks in the two examinations prior to Master's degree that is to Intermediate and Bachelor's degree examination (irrespective of the marks obtained in any of the two examinations), or 50 percent marks in each of the two examinations separately is said to have consistently good academic record.

Other Qualifications

A. For the post of temporary Professor of Physics—Experience of guiding research at doctorate level in the field of Electronics.

B. For the post of temporary Professor of Mathematics—Established ability in the field of Statistics.

C. For the post of temporary Professor of Economics—Research experience in Rural Economics.

D. For the post of temporary Professor of History: Preference will be given to those having knowledge of Indian Culture and classical Indian languages viz. Pali/Prakrit/Sanskrit.

E. For the post of temporary Readers and Lecturers in :

Physics—Research experience in Electronics Engineering/digital electronics.

Mathematics—Specialisation in Statistics & Computer Science.

Economics—Specialisation in Rural/Agricultural Economics.

History—Specialisation in Archaeological Survey.

Applications on the prescribed form to be obtained on payment of Rs. 10/- in cash or by Bank Draft drawn in favour of the Registrar, Avadh University, Faizabad by name of Rs. 15/-, are invited so as to reach the Registrar on or before **31st July, 1984** by registered post. Applications should be accompanied with copies of books published, reprints of research papers published, and attested copies of testimonials. If the applicant is employed anywhere, he should send application form through proper channel.

Dr. D.R. Tripathi
REGISTRAR

ANNAMALAI UNIVERSITY

ANNAMALAINAGAR

Applications are invited in the prescribed form for filling up the following teaching posts. Applications can be had from the undersigned on payment of Rs. 10/- (not refundable) by cash/Money Order/Postal Order. Applications (with 5 additional copies) should reach the undersigned on or before 5 p.m. on **11-7-1984.**

Sl No.	Name of the Post	No. of Post
1.	Professor of Entomology	1
2.	Professor of Plant Pathology	1

Scale of Pay

Professor : Rs. 1500-60-1800-100-2000-125/2-2500 with usual allowances.

Qualifications

For Sl. No. 1 and 2

A person with Ph.D. Degree with ten years of experience in teaching/research in the subjects concerned.

AR. Lakshmanan
REGISTRAR

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University News

JULY 8, 1984

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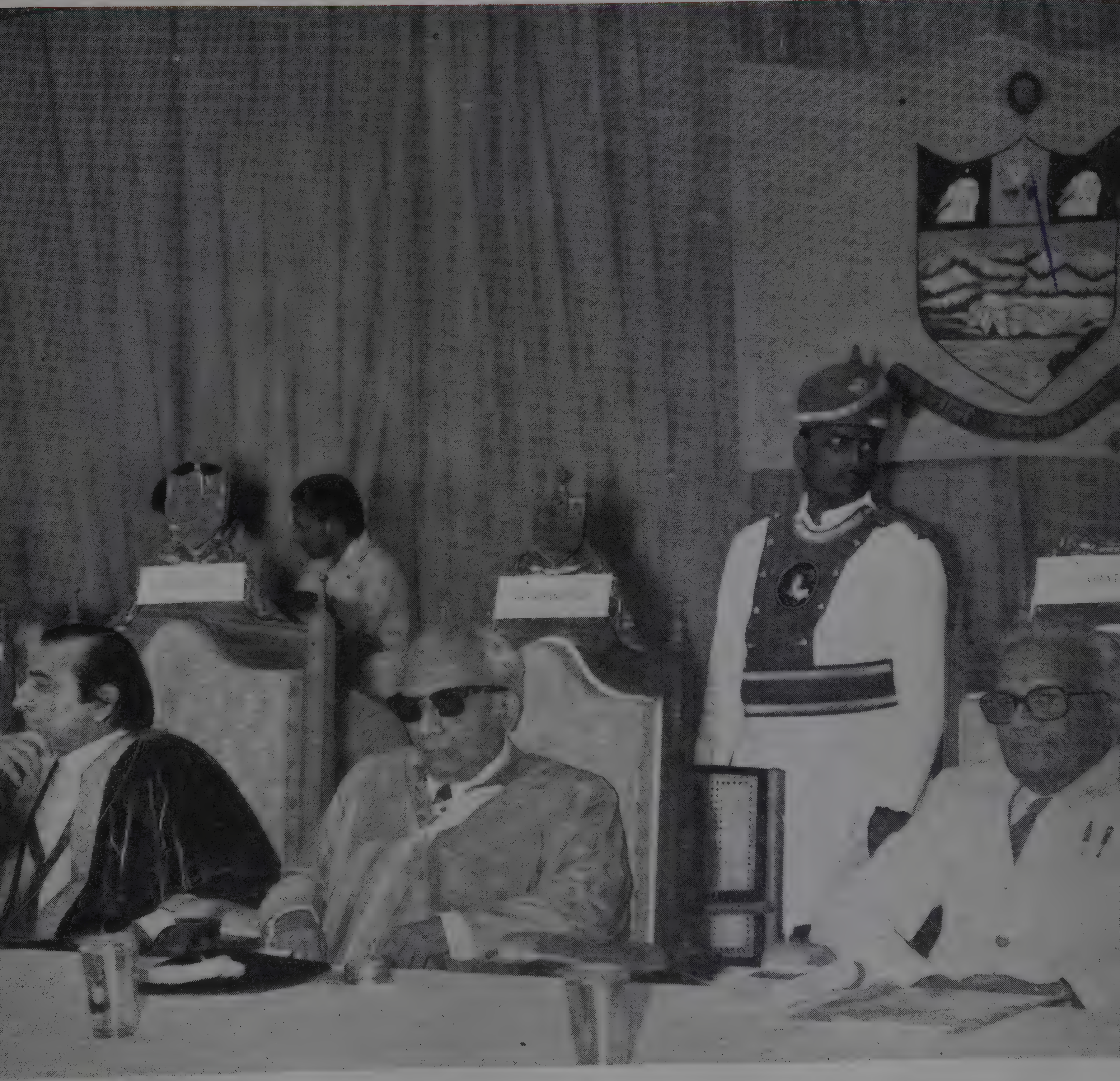

Twenty Seventh Annual Convocation of Sri Venkateswara University. Seated from left to right are : Shri Ramlal, Chancellor and Governor of Andhra Pradesh, Prof. M.V. Rama Sarma, the then Vice-

CLASSIFIED ADVERTISEMENTS

JAMIA MILLIA ISLAMIA

Jamia Nagar, New Delhi-110025

ADMISSION NOTICE

No. 3/1984-85

Admissions are open to the following Courses for the academic year 1984-85.

A. Faculty of Humanities & Languages; Faculty of Social Sciences and Faculty of Natural Sciences & Technology: (1) Ph.D. (*Faculty of Humanities & Languages* : Arabic, English, Hindi. History, Islamic Studies, Persian, Urdu; *Faculty of Social Sciences :* Economics, Political Science, Social Work, Sociology; *Faculty of Natural Sciences & Technology :* Chemistry, Geography, Mathematics, Physics ; (2) M.A. (Arabic, Economics, English, Geography, Hindi, History, Islamic Studies, Mathematics, Persian, Political Science, Social Work, Sociology, Urdu; (3) M.Sc. (Geography and Mathematics); (4) B.A. (Hons.): (Arabic, Economics, English Geography, Hindi, History, Islamic Studies, Mathematics, Persian, Political Science, Social Work, Sociology, Urdu); (5) B.Sc. (Hons.) : (Chemistry, Geography, Mathematics, Physics) ; (6) B. Com. (Hons.); (7) B.A. and B.Sc.(Pass) : (8) Post-graduate Diploma in Cartography; (9) Diploma in Modern Arabic (Evening Course); (10) Certificate in Modern Arabic (Evening Course) ; (11) Proficiency in Arabic (Evening Course) ; and (12) Diploma in Urdu Language Proficiency (for foreign students only).

B. Department of Technology : (1) B.E. (Civil) Evening Course; (2) Diploma in Civil Engg. ; (3) Diploma in Civil Engg. with specialization in Building Services & Maintenance ; (4) Diploma in Electronics; (5) Certificate in : (i) Draughtsmanship (Mech.) (ii) Electronics, (iii) Refrigeration and Air-Conditioning; (6) Diploma in Air-Craft Maintenance Engg. ; and (7) Air-Craft Technician.

C. Faculty of Education : (1) Ph.D. (Education) ; (2) M. Phil., ; (3) M.Ed. (Full-time and part-time); (4) M.A. (Education); (5) Master of Fine Arts (M.F.A.); (6) Advanced Diploma in Special Education; (7) B.Ed.; (8) Bachelor of Fine Arts (B.F.A.) (9) B.A. (Hons.) in Art & Art Education; and (10) Diploma in Basic Training.

D. Schools : (1) Jamia Higher Secondary School (10+2): (i) Secondary School Certificate, (ii) Senior School Certificate : (General Stream-Humanities, Science & Commerce, Vocational Stream—Commerce & Engineering); (2) Jamia Middle School; and (3) Jamia Nursery School. **Note : Very few seats are available in Classes I, IX & XI only. Priority will be given to the wards of the Jamia employees and boarders, subject to the availability of seats.**

E. Correspondence Course in Urdu (through the medium of Hindi and English).

F. Prospectuses with Admission Forms can be had from M/s. Maktaba Jamia Ltd., Jamia Nagar, New Delhi-110025 or from its Branches at (1) Urdu Bazar, Jama Masjid, Delhi-110006, (2) Shamshad Market, A.M.U., Aligarh-202001 and (3) Princes Building, E.R. Road, Bombay-400003, on any day except Sunday and Holiday between 10.00 a.m. and 4.00 p.m. on cash payment of Rs. 6/- for the **Three Faculties (Combined)**, Rs. 5/- for the **Department of Technology**, Rs. 6/- for the **Faculty of Education** and Rs. 3/- for **the Schools (Combined)** or by sending a crossed Postal Order of Rs. 7/- for **Three Faculties (Combined)** : Rs. 6/- for the **Department of Technology**; Rs. 7/- for the **Faculty of Education**; and Rs. 4/- for **Schools (Combined)**, payable to M/s. Maktaba Jamia Ltd., New Delhi alongwith a self-addressed envelope of 18× 25 cms. size. Prospectuses with Admission Forms will be sent Under Certificate of Posting.

G. Prospectuses with Admission Forms will be available from the following dates:—(1) Three Faculties (Combined)-3-7-84; (2) Department of Technology-23-6-84; (3) Faculty of Education-22-6-84; and (4) Schools (Combined)-3-7-84.

H. Last dates (Upto 4.00 p.m.) for receiving the complete Application Forms for different Courses are as follows:— (1) **Ph.D. (for all the Faculties)** : A copy of the Regulation with Application Form can be had from the Registrar's Office, (Jamia) on cash payment of Rs. 5/- or by sending a crossed Postal Order of Rs. 6/- payable to Jamia Millia Islamia, New Delhi, alongwith a self-addressed envelope of 18× 25 cms. size. Candidates may apply for admission by 20th August, 20th December and 20th April in the year; (2) **Three-Faculties (Combined):** (i) B.A./B.Sc./B.Com. (Pass/Hons.) I Year-23-7-84; (ii) M.A./M.Sc. (Previous)-4-8-84; (iii) Diploma, Certificate and Proficiency in Arabic/Urdu-4-8-84; (3) **Department of Technology:** (i) B.E. (Civil) and all the Certificate Courses-7-7-84 and (ii) All the Diploma Courses-10-7-84; (4) **Faculty of Education :** (i) M.Phil.-30-7-84; (ii) M.Ed.-16-7-84; (iii) M.F.A.-16-7-84; (iv) M.A. (Edu.)-11-8-84 (1.00 p.m.); (v) Adv. Dip. in Spl. Edu.-16-7-84 (1.00 p.m.); (vi) B.Ed.-16-7-84 (1.00 p.m.); (vii) B.F.A./B.A.(Hons) in Art & Art Edu.-16-7-84 (1.00 p.m.); and (viii) Dip. in Basic Training-16-7-84 (1.00 p.m.) ; (5) **Schools :** (i) Jamia Higher Secondary School for Classes IX & XI only-14-7-84; (ii) Jamia Middle School for Class I only-14-7-84; and (iii) Jamia Nursery School : Application Forms can be had between 16-7-84 and 25-7-84 from the Nursery School during the School hours.

I.H. Khan
REGISTRAR

PANJAB UNIVERSITY

(CHANDIGARH

Advertisement No. GP/MI-84

The Vice-Chancellor will be glad to correspond with eminent scholars who have won recognition and published work of high quality and/or are actively engaged in research with ten years experience of teaching and/or research for appointment as Professor, State Bank of India Chair in Entrepreneurship and Rural Development in the Department of Commerce and Business Management.

Initially the tenure of this Chair is five years and will be renewable for further periods as may be decided by the University. The incumbent will be expected to supervise and conduct research studies, publish research findings and guide Ph.D. scholars in addition to participation in regular teaching and training programmes of the Department. The post will be in the grade of Rs. 1500-60-1800-100-2000-125/2-2500 with allowances as admissible under the rules.

Those interested may please write to the Vice-Chancellor enclosing their bio-data with a list of their published work by **July 31, 1984.**

THE UNIVERSITY OF JODHPUR

(Establishment Section)
JODHPUR

No. JDR/U/Est)/6357
Dated : 27th June, 1984

CORRIGENDUM TO Advertisement No. 41/84

One post of Professor and one of the three posts of Associate Professors under Plan posts shown against Mathematics Department are for Professor of Statistics and Associate Professor of Statistics respectively in the Department of Mathematics and Statistics.

One post of Associate Professor is added under Plan Posts in the Department of Zoology.

One post of Assistant Professor under Plan posts and two posts of Assistant Professor under Leave Vacancy are added in the Department of Physics.

P. S. Bhargava
REGISTRAR

UNIVERSITY NEWS

VOL. XXII JULY 8
No. 26 1984
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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :
M. S. RAMAMURTHY

Sathya Sai Baba's Inaugural Address

English translation of the inaugural address delivered by Bhagwan Shri Sathya Sai Baba at the Workshop on Examination Reforms held at Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam on March 19, 1984.

It is becoming increasingly difficult, under modern social conditions when the many-headed monster of egotism is leading man along the path to perdition, for man to preserve and promote the worth and values which are their basic excellences. Survival as men has become well-nigh impossible. Desire parades its poison fangs; Luxury hisses all around; Lust stings in deadly strikes; man is caught in mortal coils, in spite of his vast and varied knowledge and he is fast falling into his doom.

Being educated is an achievement; broad culture is something different. But both are essential for the blossoming of man. Every one has to cultivate his nature as an individual (vyakthi) and develop a personality, through moral progress. Personality or as in Sanskrit, pourusha (from purusha or person) has to be fostered; it is not native to all. It is evident in certain historic individuals or epic heroes. Virtue, Justice, Steadfastness and other qualities made Rama of the Ramayana a personality, a Vyakthi (vyakthi—one who has manifested to the fullest extent the basic goodness that is in him). Emperor Asoka too succeeded in forging himself into a vyakthi. For vyakthi is one who makes vyaktha (manifest) the Divine qualities that lie dormant in him. In ancient times, in the Greeco-Roman world, actors in dramas were personal for the roles; when God took on the human role, the Christian world borrowed that word. So the term person or personality denotes not a human being but a being who manifests and experiences the Divinity which is his Reality.

In order to make a person aware of this Reality, instructions in morality are essential. Moral Science has to be practised, so that man can be uplifted into higher levels of consciousness. The Sanskrit word for morality is Neeti. Neeti means that which 'leads', 'guides'.

Moral Science can unfold the distinct human virtues and excellences, lead man along the path to his Divine Destiny and render his life wholly beneficial. Neethi instils and encourages good conduct and good actions. It rescues man from a barren career.

Good and bad, right and wrong, true and false-these words have deep meanings treasured in them. They are not to be treated with contempt or ridicule. They are to be weighed and distinguished so that man chooses and nourishes the good, the right and the true. Moral Science confers and cultivates the capacity to discriminate and decide. Education today has lost its value, only because instruction in this science has been given up.

The ancient educational system ensured not only a pareeksha (measure) of the knowledge the student gained but also a raksha (treasure) of wisdom which could safe-guard him throughout life. Now, the pareeksha (examination, measuring, evaluation) has become a siksha (punishment) for the examinee; it has been reduced into a 'memory test', from the former high status of a 'morality test'. It does not encourage the development of the students' morality and the manifestation (vyaktha) of the latent Divinity.

The educational system has become perverted and degraded due to the impact of temporal, regional and other historical reasons. In past ages, education was directed towards the achievement of quality; only a few dedicated their lives to education. Now, attention is focussed on quantity, on number. Educational institutions are sprouting as plentifully as ant-hills everywhere. Every street, every village has centre for education. Of course, effort is spent on starting them but no effort is spent to assess the result gained. Noticing the swollen limbs of her child, the mother infers that the child is getting strong. She does not realise that the child is ailing from oedema. Education is progressing fast but not in a healthy manner; it is not progressing as a panacea for solving the problems that confront the world. The only remedy for the ills of the system is to transform it in the light of the ancient ideal of implanting the eternal Truth and promoting the ancient culture, along lines relevant to the present ages.

Now a days, every one is seeking authority and rights; no one appears to care for responsibility and duties. As a result, moral, spiritual and other higher values have disappeared. Justice and honesty have disappeared even more totally. Educated people suffer from these faults far more than the uneducated. Whenever one spreads a newspaper and starts reading it, one is confronted by news of kidnappings, hijackings, and dacoities. The persons engaged in these cause social unrest and plunge the country in fear and anxiety. And, one finds on second thoughts, that behind them all are "the educated".

Why are 'the educated' resorting to such paths? They grow up without any training in moral conduct and any reverence for culture. Hence, they are beset by tragedies in life. Education has as its goal, the provision of livelihood. No. No. It must have as its goal, the perfection of life. Unless the system is transformed, the nation cannot be transformed. The system must provide education that uplifts, purifies, sanctifies and removes egoist impulses. Those who are then moulded by such a system cannot be drawn along wrong paths; they will not be subservient to others; they will shine in the light of their own intelligence and skill. They will be masters of a treasure which is beyond the reach of fire and flood, of rules and thieves, and of legal claimants and brothers.

However, education today is proceeding on lines that even dehumanises man. Knowledge with no sense of direction, indiscriminate conduct and behaviour, scholarship devoid of purposiveness, human existence with no concern for world peace and prosperity, comradeship with no trace of gratitude. music that is not sweet, education that does not instil humility—these can never earn the adoration of peoples.

Education is the basis on which all fields of human activity thrive. From the labourer toiling on the farm to the manager who heads a bank, from the post wielding the pen to the farmer holding the plough and the merchant busy in the bazaar, all are affected by the education to which they are exposed. The beggar as well as the billionaire are both equally influenced by the education they receive.

If a country has to prosper, the educational system has to be proper. A proverb in Telugu warns, "If the daughter-in-law is dark in complexion, the progeny is bound to be dark". When education is degraded, the entire country declines. Today, the world is overwhelmed by anxiety, suspicion and fear. Clearly, the reason lies in defective education. Teaching as well as learning must be based on ideals of love and unity.

Can the skill to read and write
make a man educated?

Can degrees earned at College
make a man educated?

Can knowledge sans wisdom sans virtue
be hailed as good?

If education is for living, birds and beasts
are far ahead.

Education must equip man with answers for the fundamental questions—what exactly is the living process? How should one live? Educators must first endeavour to instil a sense or morality and on itegrity into the pupils. Then, they will be honoured as leaders of the country and its peoples. Under their guidance, students will be building the royal road to progress. Their relationship is that between the object and its image, two bodies attuned to one ideal, the morally motivated life.

Information Servic
2 SEP 1984
MYSO

The tree that grants the wish
stands in the garden heart;

Round it abound thick thorns
and wicked weeds;

Uproot the weeds; destroy the thorns;
the Tree does come to view.

That is the Tree, the Heavenly One, fulfilling every wish. That tree is Tree of Virtue, of the Good Life. The weeds and thorns have to be removed in order that the Tree may grow and yield fruits in plenty. The University should aim at pruning and cleaning the garden and reveal the Divine that is enclosed in the human.

The 'University' is known as (Sarva-Kala Sala) an institution where 'kalas' are taught and promoted. But, the word 'kala' is generally used to indicate artistic skills, like acting in a play. But the skill has much greater and deeper significance. Man should ignore the human heritage and manifest his innate Divinity. That is the art in which he should excel. Ramanna, the actor, playing the role of Rama, denies his human-ness and projects his reality. Having been encumbered with a body, one has to soak oneself in his genuine nature, which is Divine. Each individual has a role in the play, being presented on the world-stage. Atma is the Director. When the Director is ignored, the play becomes a flop.

Question Bank : We are today inaugurating the Question Bank. What is the function of a bank? A bank is a safe place wherein one deposits valuable articles that one has acquired, like gold, currency notes etc. One feels they will not be safe with oneself, because of natural calamities, social unrest, or insecurity in the home itself. Questions too have to be deposited in the bank, for they are valuables that require safe keeping. No one would wish to keep in the custody of a bank, inferior metals like copper and brass. So too, the questions that are placed in the bank should be of great worth and exemplary in quality. They should be straightforward and honest. They have to lead youth into a bright future along the royal road.

We have to observe certain guidelines while preparing the questions. They have to be based on the texts which students use, and should be related to the syllabuses laid down. No purpose is served if they do not arise from either the textbooks or the syllabuses. The person who frames the questions must himself be aware of the answers. Now-a-days, a person sets the questions but he does not know what the answer should be. This is one of the reasons for the prevalent agitational atmosphere and the distrust between teachers and students. The Supreme Court recently decided that the question in a paper for a Medical College examination was wrong. Questions followed by problems which the examinee has to solve are contradictory in many cases. They do not correspond with each other. The person who prepares questions should possess both vision and a sense of balance.

Another point to be attended to: Many teachers now-a-days skip portions of the syllabus, and so, they frame questions only on the chapters and sections they have taught. How can this practice evaluate correctly the students' knowledge? On each chapter, we must prepare for the bank a comprehensive list of atleast a hundred questions. Whenever time permits, the students must be confronted with these. They have to be encouraged to be fully conversant with the entire syllabus.

Whatever we teach present day students, whatever guidance we offer for their conduct reaches only their heads. And, the teacher has to instruct and guide from the heart, in full sincerity. What happens now is quite the opposite. The teacher teaches from the head; the student stores in the head. They enter the examination hall with their heads full; they spread on the manuscripts the contents of the head and return empty-headed, to receive the Degree. What good can such young men do to the world ?

Modern education is of the polaroid picture pattern. We cannot get more copies of the picture, for it has no negative. The education does not get imprinted on the heart-plate. The student can, if it is so imprinted, benefit throughout his life by reproducing the education he has gained. Many students earn high ranks and first classes in the subjects they have specialised in. They do not have the slightest acquaintance with other subjects. They should not have a narrow mind or limited knowledge. They have to cultivate 'common sense' and acquire 'general knowledge'. Without caring for these, students plunge deep into one single subject but find it difficult to float. One must learn to dive when one loves to and to float when one desires to. Then only can he a skilled swimmer. One should not spend all his years in mastering a single subject. Let your attention be predominantly on one subject but have the rest as supportive and complementary.

Extreme specialisation is not desirable. Many students after passing in the M.B.B.S. examination, specialise in diseases of E.N.T., the Heart, the Prostate etc. and become experts in those fields. Now, when they have to conduct a surgical operation a series of tests has to be made to find out whether the patient has diabetes, high blood pressure, anaemia or asthma. Though an experienced and famous expert, the doctor has to send the patient to many other doctors saying, "Have your blood tested and bring me the report". "Get yourself examined for asthma and bring me the information". If only he had learnt to conduct these tests, he could have done the operation much quicker and with greater confidence.

Teachers too must have some knowledge of ancillary subjects, apart from the one they have specialised in. Physics, Zoology, Botany, Chemistry—one of these may be the special subject, but, the teacher must be acquainted with the rest. For, to understand Physics, Mathematics is needed. The questions being prepared must deal with the complementary subjects also. Awareness is Life; Keenness to be aware of all is the unique feature of Life. Every subject should contribute to the expansion of this faculty of awareness. The bank must have questions covering the entire syllabus, the prescribed textbooks, all that has been taught in class and the general knowledge acquired by the students about other subjects. When we have a hundred thousand questions in the bank, a paper can be set as soon as the need arises. One has no need to spend, as Gokak remarked, two days or three.

Teachers have to consider another point too. They demand separate rooms, because they have to prepare for the impending class. How can a Professor justify his position when he has to prepare for the class that comes next? The entire subject has to be imprinted on his heart long before he meets the class. He can just remind himself of the topic he is about to teach. When he teaches them only what is contained in books, the student can as well stay at home and study the same books. The contents of the books have to be stored and later transformed in the head through constant practice and application. This is the genuine educational process.

An excuse often put forward is that the teacher has no time to spare. But, a day has twentyfour hours. Of course, physical rest and mental relaxation need some time. Some time has to be set apart for personal matters. Much time is wasted in irrelevant and barren talk. One can improve a great deal if the talk is on things useful for oneself. He can also instruct and inspire his students better. The teacher who is constantly engaged in studies earns the right to teach. Do it for your own sake; it helps the students also. When the car runs, the battery is also charged. When it is kept in the garage, the battery 'downs'. To get more energy, the engine must be in running condition, in teaching, teaching, teaching. Energy keeps the lamp burning; study keeps the teacher's energy trim. Many lamps can be lighted from it. These things need not be mentioned here, in this gathering of teachers of our University. Here, every one is engaged in study, with full faith and dedication. They are all intent on the progress of students. But we have to pay heed to the situation outside, and be more alert and render more service. I am referring to this only in order to remind you of the responsibility and not because such shortcomings are prevalent here. No. I desire only that you place greater faith in the usefulness of the Question Bank and provide yourselves with a copious stock, so that the students are encouraged to attain higher levels of efficiency.

Teachers shall not involve themselves in politics. Political life in our country was a life of sacrifice and dedication. Political leaders renounced position and power and even their very lives in their struggle to promote the peace and prosperity of the country. Today, politics has become the frantic pursuit of self-interest and self-aggrandizement. Formerly stalwarts like Lala Lajpat Rai, Bipin Chandra Pal and Bal Gangadhar Tilak were active in the political field. When someone pointed out to him the prospect of his becoming a minister in the Government of Free India, Bal Gangadhar said, "I have no need of a ministership. I wish to continue as a teacher, so that I can offer the country a hundred ministers. I shall serve the students and raise them as Leaders. The teacher alone has that privilege". That was the high principle of patriotic sacrifice that the leaders of those days had. You all know that today we have

Politics without principles;

Pleasure without purity;

Commerce without morality;

Science without unity; and

Education without character.

These are useless and also dangerous. So, do not enter political life. When teachers get embroiled in politics, students who follow their lead, also get caught. Teachers have to pave the way which students have to follow and make it a royal road, a floral path, smooth and safe.

Teachers should not have unions. Union means a union of hearts, an association based on love and mutual understanding. These are totally absent in unions. Factional fights ending in violence and injury, even death mar the elections. Unity can be found only where purity based on Divinity is established. Workers and farmers have the need for unions, for they rely on knowledgeable persons to represent their problems to the Government. They seek some influential persons and educated persons to help them. But, you have the education and the capacity to present your problems. So, why form unions? On the other hand, if you feel helpless and resort to others, you are reducing yourselves to the position of slaves. The leaders you decide to obey are interested in multiplying and intensifying problems than solving them. Relying on our support, they become important, prestigious and rich individuals. They engineer strikes by teachers, which naturally teach students too to outdo them. There is a proverb, "When the old monkey leaps four feet, the young monkey leaps ten". Hence, the teachers, through a single selfish step ruin the careers of hundreds of students. These strikes and agitations prolong the years of study. Students who could finish the postgraduate course in 2 years and enter some profession in life have to spend four years. They waste two precious years, a period of time they can never regain. Time wasted is life wasted. So, when agitation is absent, students earn two years of time.

Teachers must do some self-examination, before deciding on ways and means of examining students. A person earns the right of reforming others only after reforming himself. I wish that you become perfect, that the students become perfect and as a consequence, the Institute is shaped into perfection. I wish that this Institute stands forth as an example for other educational institutions to emulate.

Remember another point too. You cannot get, anywhere else, students like ours. When we have here such peaceful, dedicated and spiritually-minded students, you must consider guiding them and developing their talents for very valuable service. They possess in harmonious combination mental, moral and spiritual excellences. They are loyal and humble, with hearts full of love. If ten such are helped to blossom to the full, they can ensure the progress of the country. When students learn to obey, they are preparing themselves to lead and to command. But, today no one wants to obey and so no one has the competence to lead.

While evaluating answerscripts, attention has to be paid to clear handwriting and correct spelling. Illegible writing and haphazard spelling are signs of sloth and negligence. Examiners usually allot two marks for this and four marks for that, when they find it difficult to decipher the answers. Marks have to be given strictly and impartially and not out of pity or prejudice. If another person checks the valuation done by one examiner, he too has to agree with the estimate and the judgement, if it is to be reliable.

Our students are earnest about studies and anxious to progress, So, you can, through discipline, help them a great deal. Students today do not welcome discipline and therefore, they fail and fall. The horse needs reins, the elephant needs a goad, the student needs disciplinary rules. A horse without reins throws the rider down; and elephant which has not known the goad casts the mahout nine feet off by a swish of its tail. The student who is not trained in discipline does not care a jot for his teacher. Of course, discipline has to be exercised through love. Our University considers discipline or *siksha* essential. For our students, it provides an armour, a *raksha*. For example, punctual attendance is insisted on for the classes. There can be no licence for proxy attendance, which prevails in many colleges. Teachers must be vigilant enough to discover whether when Ramanna's name is called, some one else responds.

Besides Question Bank, this University has to open a Discipline Bank, a Conduct Bank, an Attitude Bank etc. Teachers of our University are undoubtedly devoted to these ideals and earnest in their tasks. I wish that you derive greater and greater joy therefrom and share it with all else so that the nation gains prosperity and happiness. ☐

Calendar of Events

Proposed Dates of the Event	Exact Title of the Conference/Seminar/Symposium/Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be Contacted
August, 1984	Conference on Techniques of Planning: An Overview	To review the past and to project for future	Department of Commerce, University of Bombay	Dr. B.D. Ghonasgi
August 27-30, 1984	Second National Seminar on Crystal Growth	To bring together scientists working in the field of Crystal Growth	Crystal Growth Centre, Anna University, Madras	Prof. R. Ramasamy
October 8-14, 1984	Seminar on Locus of Control and related Variables in Social Action	To highlight the significance of locus of control research in relation to social development in India	Department of Psychology, Calicut University	Dr. M.A. Faroqi Director

SEMESTER TO SERVE STUDENTS

Parveen Akhtar (Ms)*

Education system in India is now in transition. The long adopted system of education is getting changed with new ideas borrowed from different sources. The existing traditional pattern exercises a crippling effect on the physical, mental and moral capacities of students and it has led to the lowering of academic standards, weakening of discipline and widespread use of unfair practices for securing certificates, diplomas and degrees. Attempts are being made to bring a change in course content, syllabuses, methods of teaching and evaluation for a radical reform of the entire system of education.

The Education Commission (1964-66) has stressed the need for the improvement of teaching and evaluation in higher education allowing flexibility and freedom to the teachers and students. Therefore, the ideas generated by the Education Commission (1964-66) received due attention from the University Grants Commission (UGC). The UGC appointed committee of a few experts which gave its ideas regarding the Semester system, if carried out in a coordinated and systematic manner, is likely to initiate a process of modernisation of and improvement in both teaching and learning process apart from bringing about the much needed reform and flexibility in course content and evaluation.

Definition of the term 'Semester'

The dictionary speaks about the term Semester as :

"half of the academic year usually 16 to 18 weeks" (Dictionary of Education).

"A period of term of six months especially in German Universities and some U.S. colleges, the college half year" (Short Oxford Dictionary).

So, it is clear from the above definition that, the term Semester signifies the division of the academic year into two parts, called Semester with the designing of the courses separately for each Semester.

Semester in India

The Semester system is an innovation for India. It was first introduced by the Indian Institute of Technology located in Kharagpur, Kanpur, Madras and Bombay and by the two Agricultural Universities of Pantnagar and Ludhiana. Modelled after the Land Grant College in U.S.A., these Universities have the triple responsibilities of carrying out teaching, research and extension education in different branches of agriculture. Most of the Agricultural Universities adopted the trimester system with the operating principle of the Land Grant College but more than half of them changed over to the Semester pattern later on.

Gradually the Semester system has started getting absorbed into the picture of educational system in India. After the technological and agricultural universities, a few affiliated and residential universities came forward to introduce the Semester system either in part or as a whole. Bulletin of higher education by the UGC mentioned that the Semester system is in vogue in more than 40 universities, 5 deemed to be institutions and all agricultural and technological institutes. The introduction of the Semester system in several institutes of higher learning has given a new pattern to the educational structure.

In the affiliating universities where there is a Semester system, some difficulties and problems are faced. For example, the understanding among all the colleges of the different aspects of the system including clarity among the staff members is not adequate. The problems and difficulties differ from university to university with different types of organisations. The M.S. University of Baroda, Annamalai University, Jawaharlal Nehru University etc are residential type of universities. These universities are free to select either the Semester system or the traditional system. For example, in the M.S. University of Baroda, only five faculties have adopted the Semester system, namely, Social Work, Home Science, Education and Psychology, Engineering and Technology and the Faculty of Law. Each faculty differs from the other in the organisation and implementation of the system.

It is clear from the above discussion that the Semester system is functioning in a variety of ways in different universities in India. The variation may, perhaps be attributed to the existing needs and the facilities available in each university. To make a conscious decision of a shift from the traditional annual system, it may be necessary to examine in detail not only the Semester system as it operates currently but the associated aspects of the Semester system also. The Semester system with the associated aspects are represented in the diagram given below :

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Courses of study →
1. Flexibility
2. More choices to the students
3. Freedom in framing the courses
4. Inter-disciplinary
5. Credit courses

Method of teaching →
1. Lecture
2. Discussion
3. Programme learning
4. Team-teaching
5. Project work
6. Assignment
7. Practical
8. Field work

Evaluation →
1. Internal assessment
2. Grading
3. Question Bank

Now it becomes obvious that why many Indian universities have implemented the Semester system. The reasons for the adoption of the system as an innovation by the Indian universities are many. Some of the reasons may be based on the following factors:

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*Diphu Govt. College, Diphu.

(1) The Semester system reduces the evil effects of a single terminal examination having two or more examinations in each Semester. In the year, under the Semester system, the frequency of evaluation of the students' performance increases.

(2) The frequency of examinations affects the study habit of the students.

(3) The Semester courses, because of short and coherent subject matter, may be more conveniently combined to promote the study of a variety of disciplines and particularly interdisciplinary areas. Such a course system makes it possible to coordinate studies between different departments even at the post-graduate level.

4) Under the Semester system, a teacher has the freedom to make the syllabus of the course, he is called upon to teach and examine his own students. These aspects may lead to the introduction of the internal system of evaluation, freedom of the teacher to evaluate the performance of his students in a variety of ways, for example through assignments, quizes, projects and seminars etc.

(5) The library becomes the main centre of the students' life under the Semester system.

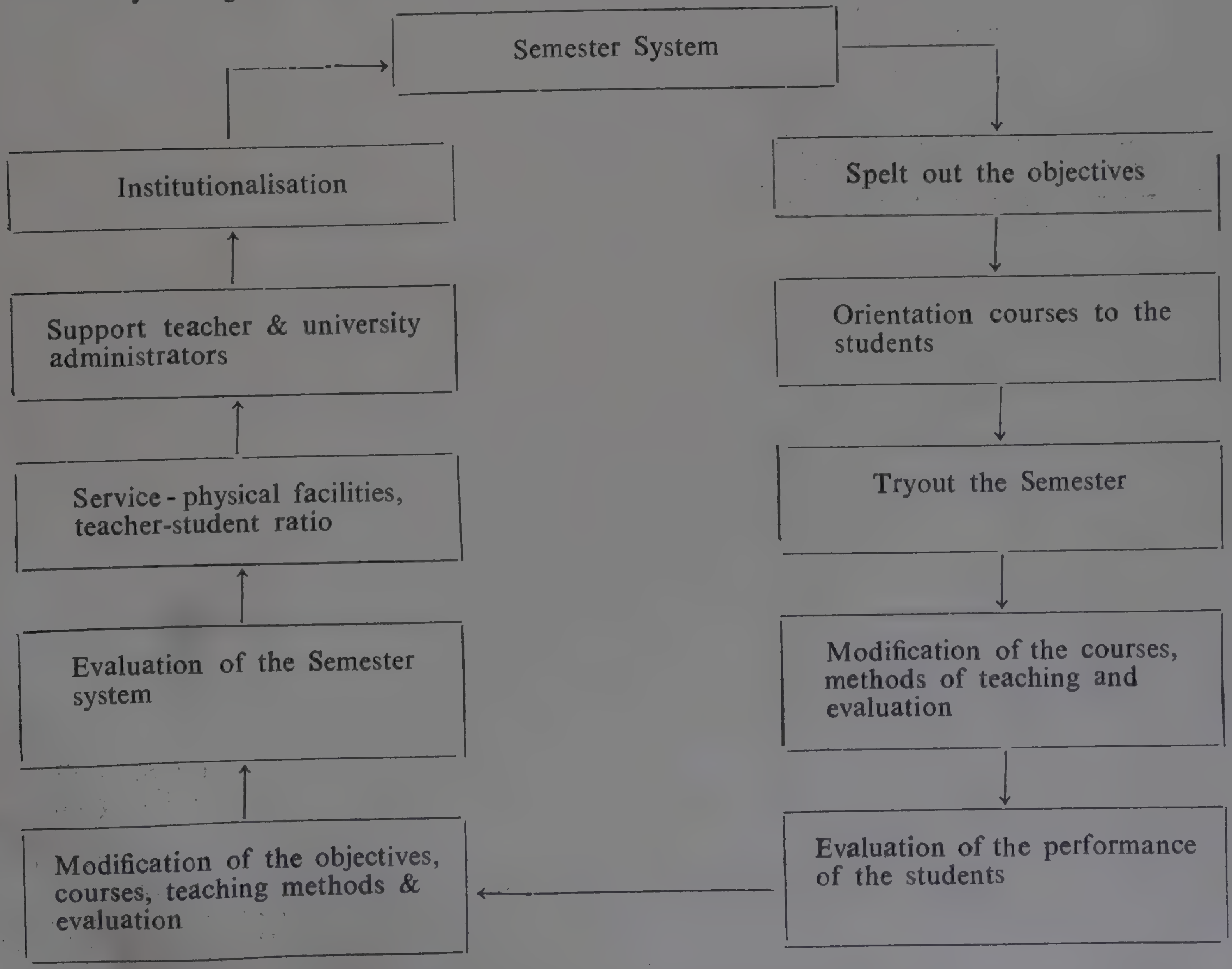
(6) The system presupposes a good deal of independent study among the students.

Conclusion

Now the question arises whether the Indian Universities will opt for any innovation or continue with the traditional pattern. The demand for reform of education can not simply be solved by introducing or discontinuing an innovation. The success of any system of education depends upon the persons who operate it and the environment where it has to be introduced. The students, the teachers, the management and the office staff all have to cooperate in making the system a success. In order to have the cooperation of all the above mentioned personnel, it is necessary to gain their faith in the system. For this the objectives of the Semester system have to be made clear to them. The author of this paper had studied the Semester system in a large number of universities for her doctoral work from a critical point of view comprising different categories of universities. On the basis of the findings of the study, the following paradigm has come as an outcome of the whole work.

It is a well established fact that the success in adoption of any system in an institution depends upon how it works to meet the requirement of the particular system. Therefore, each university can best decide which system suits its own conditions.

[*Text of the paper presented at the U.G.C. sponsored Seminar, "On the Assessment of the Students at the College level in NER," held at Gauhati from 2nd to 5th March, 1984.*]


Semester System
Spelt out the objectives
Orientation courses to the students
Tryout the Semester
Modification of the courses, methods of teaching and evaluation
Evaluation of the performance of the students
Modification of the objectives, courses, teaching methods & evaluation
Evaluation of the Semester system
Service - physical facilities, teacher-student ratio
Support teacher & university administrators
Institutionalisation

Justice Sambasiva Rao Addresses Sri Venkateswara University's Convocation

The 27th Annual Convocation of Sri Venkateswara University was held on 24th March, 1984. The Convocation Address delivered by Justice A. Sambasiva Rao, Lokayukta, Andhra Pradesh, is given below.

"It is with some sentimental and emotional satisfaction that I have come to be with you on this important occasion. Till very recently, I have had the good fortune of serving one of the foremost seats of learning in the country, namely, the Andhra University. It was in the campus of that University, the bill for constitution of this University was passed by the legislature of the then State of Andhra. The very first Chancellor of this University was the then Chief Justice of the High Court of Andhra, Sri Justice Koka Subba Rao, whom I had the honour of succeeding many years later as a Chief Justice of the High Court of Andhra Pradesh. Again the first Vice-Chancellor of this University and who rendered signal services to it was Sri S. Govindarajulu, my revered preceptor in the Madras Law College. So, you will kindly appreciate why I came to this University and to its Convocation with a glow of sentimentality.

Convocation

As Vice-Chancellor of the Andhra University I have had an occasion to gain some intimate perception of functioning of our Universities and educational system. During my travels abroad, I could collect some impressions of several foreign Universities also and could thus compare our educational institutions with theirs.

There is no doubt that education in India, particularly the Universities and institutes of technology had discharged their functions with considerable success. That successful endeavour manifests itself in the renowned scholars we had and continue to have, and also in the scientific and technological human resources we have in the country and which are also overflowing into other countries as well. India now has one of the largest scientific and technological personnel in the world.

And yet the picture has changed and every educationalist is now much concerned and worried over the state of our Universities. This feeling of concern and worry is justified because a climate of discontent is pervading most of the Universities.

First and foremost, we must recognise the fact that ours is a changing and developing society. Discontent and to some extent disorder, appear to be concomittants of change and growth. The Universities cannot escape from this phenomenon, since they constitute an integral part of the society and also because they are centres where the youth of the nation study and work. The young are the most natural instruments for change. When we appreciate this, perhaps we will be able to view the whole problem with sympathy and understanding.

Then there are other factors also which are confounding the situation. With best of intentions on the part of all concerned, including the University Grants Commission, it has become very difficult to have a planned development of the Universities and higher education. Emergencies frequently arise in the field of higher education and consequently urgent solutions will be found to meet the requirements of the new situations. Deviations from planned progress have become frequent in several Universities of the country. With the result, ad hocism has become a regular feature in University administration. Ad hoc solutions may be useful on occasions, but when they become the general practice, they undermine the basic structure of the Universities, for that matter any institution or even a State, or a Government.

One of the principal reasons for the disappointing performance of the Universities is lack of adequate resources. Many Universities suffer from lack of funds and equipment. This is seen more vividly when the Universities in the States are compared with the Central Universities and Institutes. I am not saying that the latter categories are wallowing in affluence. But when compared with those in the States, they are better off and are able to cater at least to their basic requirements. Though the University Grants Commission has been trying to do its best for the Universities in the States, the distressing fact remains that they suffer from lack of adequate means. I am afraid that there is no scientific financial planning of Universities' finances and requirements. The concerned State Governments would be better advised to have the Universities' budgets prepared in proper time and what is more important, to release the funds as per the budgets at the appropriate times. For want of matching contributions from the State Governments, some of the grants by the University Grants Commission are either delayed in their utilisation, with escalation of prices as a necessary result, or in some cases not utilised at all.

Not that I do not realise that the various Governments are allotting substantial portion of their budgets to education. At the same time, it is of great importance that these allotted funds are husbanded carefully and released in time. The Universities in their turn, being, at any rate, considsred to be, citadels of culture, should set the example to all other institutions in the best and most effective way of utilising public funds.

The entire educational system is put under great strain and stress, because of the explosion in the numbers of students. That is a natural result of the persisting explosion of our population. Added to it, is the new awakening and urge, particularly amongst the under-privileged, to get educated. It is society's moral responsibility to afford educational opportunities to all who are eager to study. Our Constitution has enjoined upon the State to provide free and compulsory education to all children upto the age of fourteen.

To meet the requirements of the ever growing student community, we must have a plan just like we have plans for developments in other areas. I note that we do have certain educational plans. Unless we have recourse to inventive, imaginative and innovative methods of educating our youth, it is simply impossible to cater to their needs in the conventional way.

As we prepare our five year plans, let us also estimate the requirements of our scholars in different fields in the next decade or two. Let us have a rough assessment of our needs in relation to our means, as to how many doctors, engineers, teachers, scientists and technicians etc, our country will be requiring in the next two decades or so and restrict our admissions into those courses accordingly. The open house system of enrolling students as and when they come, has resultted in unemployment and wastage of human material. Therefore, it may be considered earnestly whether selective enrolment into Postgraduate courses, and science, technology and professional courses, as per the plan requirements would not be better. In my considered opinion, this would yield better results.

Education through correspondence is a fast growing method in the world. The Open University in Great Britain, has set the pace and pattern for distant education and has yielded excellent results. Several other foreign countries are adopting this system with success. In my submission, this type of education is highly suitable to countries like ours with large populations who are hungering for education. Conventional college education, as we have developed it, is totally inadequate to serve the ever growing numbers of students. Unbridled increase in number of colleges and institutions would ruin the quality of education, in addition to straining the resources of the community. Moreover, it is becoming more and more burdensome financially for students, their parents and also to the State to receive and impart education through colleges. Further a vast majority of our youth cannot afford to devote all their time for three years to regularly attend college, in order to get educated. Staying at home and also attending to some part time vocation or employment, our young men and women could be educated through correspondence courses. This will eminently suit the economic conditions of our State as well as society. In our State, we have already started the endeavour. We have a developing Open University in the State. However, in my opinion, one University alone will not be able to meet the needs of all young men and women in the State and that too in a rich variety of courses and disciplines. Unless every University in the State took up these correspondence courses and expanded them, the need for education will not be met. Inevitably there should be co-ordination among the Open University and other Universities in organising courses and avoiding duplication of disciplines. Experience we already have, shows that correspondence education is gaining popularity in humanities, including social sciences.

At the same time great care has to be taken in holding contact courses. They should be real contact courses and not make-believe ones. Audio-visual equipment and mass media should be put to maximum use in imparting distant education. Video lessons and practicals maintain an almost live contact between the teacher and the student. I am sure that this type of education will play a very significant role in imparting degree education to our youth in large numbers and at minimum cost. This is a highly desirable development in our educational system which every University should cultivate according to the needs of its region.

I have found that there is duplication of sugar specialisations in the Universities. It will lead to wasteful utilisation of limited means which are available. Since such specialisations need highly sophisticated and expensive equipment and well-qualified teachers, those courses may be limited to States or regions, making it available to students from all over the State or region. The University to be allotted that specialisation may be chosen after careful examination of its suitability.

The society and its administrative representative, namely the State, owe much to the Universities, because the youth of the country must be educated and trained for their further responsibilities. That is almost universally accepted.

Very frequently we hear of demands from the students, the teachers, the non-teaching staff and even from the administrators of our Universities for more facilities, amenities and emoluments. Several times they are justified and they must be attended to as soon as the resources permit.

Unhappily the other side of the picture is several times ignored. Do the Universities, in their turn, not have any accountability to the society in respect of the work they do and of all the resources of the society they spend? Are they, all the time, the beneficiaries and not accountable for the benefits they get? Should they not show what good work they have done as a result of utilising the resources placed at their disposal? The standard of research, teaching and training must be maintained at a satisfactory level, so that the public, the Governments, and the University Grants Commission could be persuaded to give them more facilities. If the research work is at a low standard, if the teaching is indifferent, if the learning on the part of the students is several times disturbed and is not even for a hundred days in a year and the administrative set-up is careless, what moral right do the Universities have to claim more and more facilities? Let the Universities give a reasonable account of their work and the public opinion will be with them in all their reasonable demands.

Equally important is the social responsibility of the Universities. Does the task of the Universities stop with educating young men and women? Several Universities in foreign countries function as intellectual banks of their communities and states and discharge their social responsibilities in a very meaningful manner. Their research and training vastly help in the growth of industry, trade and commerce, in the improvement of health conditions and in very many other ways. Our Universities should also play such creative role in the development of our country.

Perhaps our Universities cannot be held responsible entirely for this omission. The fact remains that our Governments and public authorities do not properly or adequately utilize the rich potential they have in the Universities. In a developing society, Universities' contribution could be very effective and beneficial. I hope and trust that our country and its institutions will be able to draw freely from the learning and wisdom that is lying untapped in our educational centres.

In fact, the intellectuals of our educational institutions should come forth on their own to advise, guide and serve the society and the administration. Their research and knowledge will prove highly useful to the nation.

Experience shows us that our Universities and Institutes have served the communities in which they function in a useful way, though so far on a minor scale. Consultancy and interaction with industry and public bodies have proved beneficial. This co-operation can be in very many ways. For instance, the departments of earth sciences can help in finding and pumping out underground water, where there is water scarcity. Equally would be welcome, if our civil engineering faculties can design houses which are at oncesuitable to our climate and cheap in cost and built with the material available in the locality. There is any amount of scope for designing self-employment schemes for the people. It is for these dormant giants to arouse themselves and go out into the community; equally so, for the Governments and bublic bodies to utilize their services.

The extension work and the National Service Schemes of the Universities are still at the embryonic stage. Formal adult education will take many years to make its imprint, while the felt and urgent need of the Indian society is that modern knowledge and techniques should be carried to the people as quickly as possible in a crash programme. New and better life can be built up for the common man only with the aid of science and technology which is suitable to the region. That can be done effectively with the active participation of the Universities. Every one appears to be aware of this potentiality; only it is not yet taken up seriously.

When the society is changing and developing, the Universities will have to modulate their research and extension work to satisfy this need and quicken this process. If research does not have practical application to the needs of the society, it will have very little validity and relevance. Research which is not relevant to the life of people dies a natural death. It is the bounden duty of our Universities to undertake this great social responsibility and to play a dynamic role in shaping the life and destiny of the Indian people.

I give my greetings and good wishes to the young ladies and gentlemen who are going out into into wider life after receiving their doctorate, post-graduate and graduation degrees. My young friends, whether you welcome it or not, the task of shaping not only your own individual careers but also the next phase of of India's history will be yours. By no means that task is going to be easy.

We, of our generation, have done or are doing our part of the work. Some of it is good. Some of it is not that good. The great hurdle that our country will have to surmount now is the low level of moral standards and human values which are pervading all our life. Rationality has become the first victim and emotional approach is the fashion of the day. A cynical view has gained strength that all this is inevitable. It is ironical and even tragic that this should happen to people whose heritage is claimed to be one of spiritual eminence.

My friends, this stage of things shall not be permitted to continue; because it is eating into the vitals of our individual and national existence. We will have to bring back to our citizens their sense of rationality, morality, self-confidence and vitality. That is the priority in our programme of nation building. As budding leaders of our national and social life, I wish you would be daring, venturesome and true to certain values and principles. Success seldom goes to the timid and the sneaky. Victory often comes to those who dare and act, So, my young friends, dare and act, and success will be yours and India's too." ☐

Campus News

Refresher course at GV

A one-week refresher course for the postgraduate students of correspondance course on Gandhian Thought was held in the Gujarat Vidyapith from 22nd May to 2nd June 1984. Thirty-five students participated and lived through the Gandhian like community life participating in early morning and late evening prayer, cleaning the roads and toilets, helping the cooking etc.

Shri Manubhai Pancholi, a noted Gandhian Thinker and Director of Lokbharati, Sanosara directed this refresher course and delivered 7 lectures on various aspects of Gandhian Thought.

Eminent national scholars like Dr. D.S. Kothari and Prof. Sugata Dasgupta also delivered several lectures on Moral Philosophy of Gandhinn Thought and Economic aspects of Gandhian Thought.

This correspondence course which is of inter disciplinary nature is becoming very popular among teachers of Rural High Schools, Doctors and even Engineers and Bank Managers etc.

Prof. Ramlal Parikh, Vice-Chancellor, Gujarat Vidyapith gave a discourse on "Essentials of Gandhian Thought". He stressed the need for a deeper study of Gandhian Thought for which now 90 volumes of collected works were available. The Centre for Gandhian Studies of the Gujarat Vidyapith has a collection of 10,000 books and journals in Gandhi Bhavan on this subject and plans to conduct several 15-day short-term extramural courses also as a part of continuing education.

New courses at AP Open University

As part of a 5-year expansion programme, the Open University in Andhra Pradesh will introduce several new courses of studies beginning this year. The university will offer diploma courses in public accounting and public relations and a bachelor's degree course in library science.

A basic engineering degree course is proposed to be offered next year.

Among the courses on the anvil are short-term diploma courses in sciences, management and translation.

Committees have been set up to study the feasibility of introducing several technology courses.

All India Radio has granted the Open University four hours of air time per week. The Open University has on its rolls 8500 students. The 28 study centres of the university are equipped with video equipment and manned by counsellors who hold regular lectures.

Dr. S. Gopal of the Jawaharlal Nehru University and two political scientists with Chicago University have recently done video programmes for the Open University.

National electron microscope facility at BHU

The National Electron Microscope Facility (NELMIF) set up by the Department of Science and Technology, Government of India, at the Centre of Advanced Study in Metallurgy of the Institute of Technology, Banaras Hindu University, has now become operational. The facility has been set up with a grant of Rs. 54.30 lakhs till March 31, 1985 under the Scheme of Intensification of Research in High Priority Areas. The Technical Committee for this national facility is headed by the Director, Professor T.R. Anantharaman.

The National Electron Microscope Facility presently consists of the newly acquired JEOL (JEM 200 CX) 200 kV Ultrahigh Resolution Research Type Transmission Electron Microscope, the twelve-year old Philips (EM 300) 100 kV Transmission Electron Microscope and the six-year old Philips (PSEM 500) Scanning Electron Microscope.

Asian studies summer institute at SNDT

A six-week Summer Institute on Asian Studies for teachers from the New York University organised by the SNDT Women's University in collaboration with the US Educational Foundation in India was recently inaugurated by Dr. (Mrs.) Jyoti Trivedi, Vice-Chancellor of the SNDT Women's University.

The six-week programme includes lectures, demonstrations, exhibitions and field trips. A few days of stay in Indian homes is also planned.

The programme is aimed at giving the teachers an insight into the multifaceted elements of Indian living.

Summer school on the spread spectrum

The Department of Electronics and Communication Engineering, Osmania University, as part of the Silver Jubilee Celebrations is organising a Summer School on the "Military and Commercial Applications of the Spread Spectrum" from July 16 to July 20, both days inclusive. About sixty participants, including several senior civilian and military officers from the Ministry of Defence, are attending this course. The Summer School will be directed by Professor Donald L. Schilling, Herbert Kayser Distinguished Service

We Congratulate . . .

Prof. R.C. Paul, Vice-Chancellor, Panjab University, on his receiving an extension in his term for a further period of six months i.e. upto December 31, 1984.

Professor from the City University of New York, U.S.A.

Though the concept of the "Spead Spectrum" has been known for a number of years, the technology is new, and it is to arrange the transfer of this new technology that Osmania has sought to organise this Summer School. The Military in the United States has already adopted this new technology in communications, but the civilian applications of the Spread Spectrum are expected to be ushered in only in the nineties. It is therefore natural that this Summer School has generated a lot of interest in various Government and private Communications agencies, which are sending their representatives to attend this prestigious Summer School.

Law courses at Bangalore Varsity

The proposal for starting a 5-year Law Degree Course from the current academic year has been dropped by the Bangalore University.

The exsisting pattern of 3-year Law Degree Course will continue during the 1984-85 session and the next year.

Entrance examination for B.Ed. courses in Andhra Pradesh

At the 51st Conference of the Vice-Chancellors of Universities in Andhra Pradesh held on June, 22 and 23 at Kakatiya University it was decided that all the Universities in Andhra Pradesh will have a common Entrance Examination for admission to B.Ed. Courses from next academic year.

DU correspondence course

The University Grants Commission has allowed Delhi University's School of Correspondence Courses to add M.Com and M.A. (History) to the list of courses that the School offers.

Madras University

At a recent meeting of the Syndicate, the Madras University is reported to have taken a decision to scrap forthwith the revaluation scheme. However, students can avail of the benefit of retotalling.

The University has agreed in principle for instituting a 3-year BSc Course in Aquaculture and a Bachelor of Physical Education Course.

Panjab University

The Panjab University has decided to combine the UGC schemes comprising Centre for Continuing Education, Regional Resource Centre and Centre for Adult Education & Extension Programmes. This Centre will coordinate its working with that of National Service Scheme.

News from Agril. Varsities

Timely paddy transplantation ensures high yield

Experts of the Punjab Agricultural University have said that optimum time of transplanting daddy nursery greatly affects the yield. They have suggested that the transplanting of high yielding varieties of Paddy like PR-106, IR-8 and Jaya should be completed by 10th of July. However, if the transplanting becomes late, older nursery (up to 60 days) of these varieties should be used.

These experts further say that in some areas of the State, especially in Patiala district, where bacterial leaf blight (BLB) was a problem last year, farmers were advised to grow PR 4141. Such BLB prone areas should be transplanted with already raised PR 4141 nursery preferably before 10th of July. For late transplanting after mid-July 35 to 40 days old nursery of shorter duration varieties PR 103 and Palaman 579 should be used. Basmati 370 should be transplanted in second fortnight of July.

Adoption of new communication techniques urged

Dr. Khem Singh Gill, Director of Research of the Punjab Agricultural University addressing the delegates of a 5-day workshop on extension teaching methods and communication techniques for agricultural inspectors of Punjab at the Punjab Agricultural University said that the field staff of the State Department of Agriculture should adopt modern communication techniques to apprise the farmers of the latest farm technology since the agricultural pattern had altogether changed. Dr Gill further said that timely transmission of new farm technology to the farmers would further help in boosting food production of the State.

The workshop was organised by the Department of Extension Education of the University.

Sports News

Guru Nanak Dev University awarded Maulana Abul Kalam Azad Trophy

The Guru Nanak Dev University again emerged number one University amongst the Universities of India in the field of sports as it annexed the coveted Maulana Abul Kalam Azad Trophy for the years 1980-81 and 1981-82 for overall excellence in sports. The University won this trophy for the fifth consecutive year.

Giani Zail Singh, President of India, gave away this highest sports award of the country to Dr. J.S. Grewal, Vice-Chancellor of the University at a investitute ceremony held at Rashtrapati Bhavan, New Delhi on June 20. The Joint Secretary, Department of Sports, read out the citation of the awardee of Maulana Abul Kalam Azad Trophy. Sardar Buta Singh, Minister of Sports was also present on the occasion.

This trophy instituted by the Ministry of Education, Govt. of India, is awarded to a University which secures highest points in the field of sports in International, National and Inter-University tournaments on the recommendations of the Association of Indian Universities.

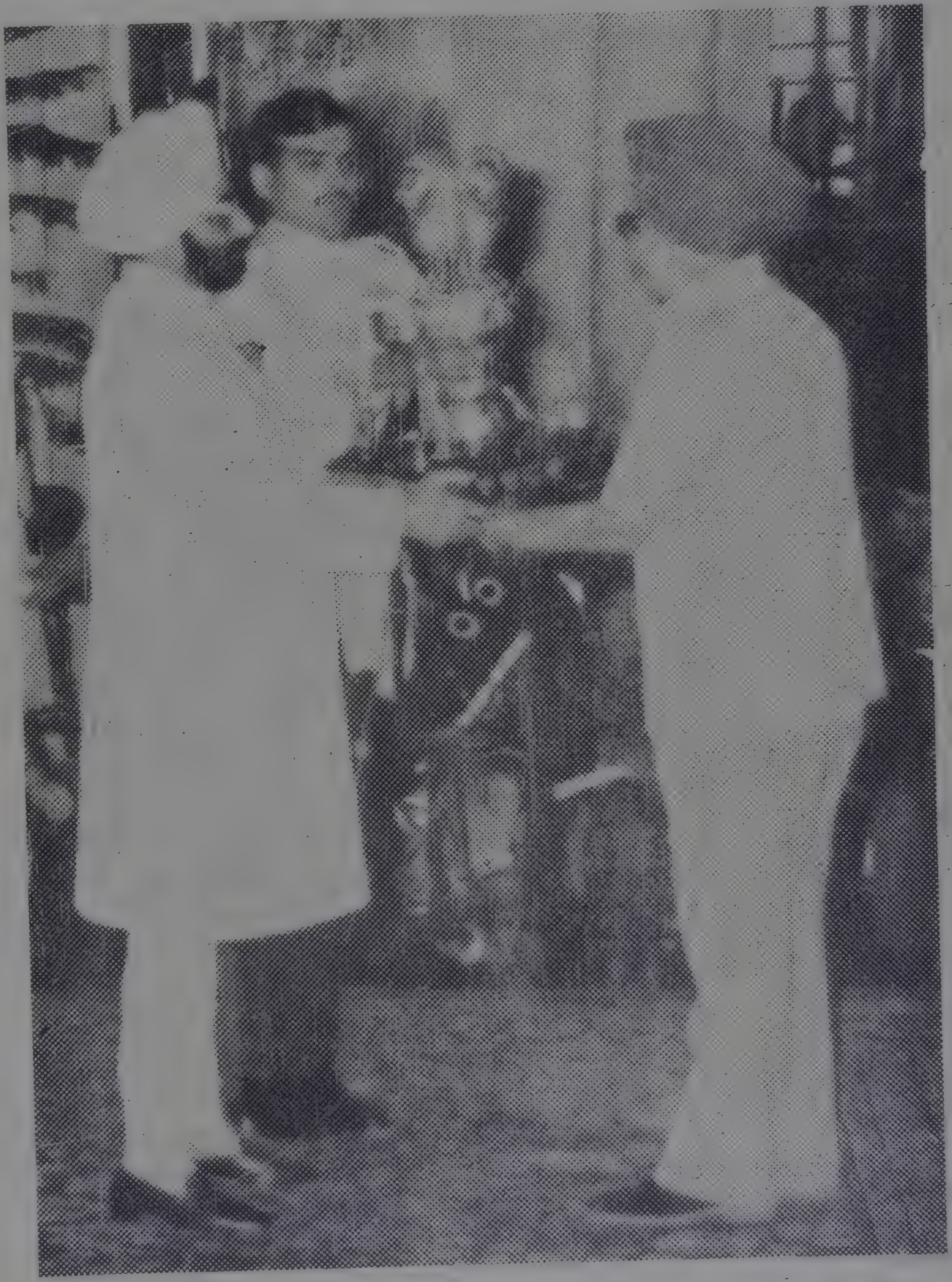
Guru Nanak Dev University had won Maulana Abul Kalam Azad Trophy, for the years 1976-77, 1978-79, 1979-80, 1980-81 and 1981-82. In 1974-75 and 1975-76, the University secured the Runners-up position and in 1977-78, it was placed third.

During 1980-81, the University also won General Championship Trophy instituted by the Association of Indian Universities in the name of Late Dr. B.L. Gupta, former Professor and Head, Department of Physical Education, Panjab University, Chandigarh.

Keeping in view the sports achievements of the University, the University Grants Commission Visiting Committee which visited the Guru Nanak Dev University last year remarked:

"It is a matter of immense joy to note that the University has made rapid strides in the sphere of sports as well. We are happy to learn that among all the universities in India, Guru Nanak Dev University has the largest representation, at the Asian Games and it has been sucessively winning the Maulana Abul Kalam Azad Trophy for excellence in sports for the past many years"

The Department of Physical Education of this University has been organising 55 Inter-College tournaments every year. More



Giani Zail Singh, President of India, awarding Maulana Abul Kalam Azad Trophy to Dr. J. S. Grewal, Vice-Chancellor, Guru Nanak Dev University.

than 25 University teams (Men & Women) have been participating in the Inter-University competitions. Prior to participation in the Inter-University competitions, coaching camps for men and women are organised for imparting latest scientific training in order to attain excellence in sports. Summer conditioning coaching camps for selected players/athletes are organised at hill stations for physical fitness.

In 1980-81, the University won six Inter-University tournaments in Athletics (Men), Gymnastics (Men), Gymnastics (Women), Volleyball (Women), Football and Hockey (Men), Three Runners-up positions in Boxing, Badminton (Women), Basketball (Women) and Water-polo. Fourteen athletes/players represented the country in the various International competitions during this year. Twenty-two NSO scholarships @ Rs. 1200/- p.a. were awarded to the outstanding sportsmen and women of this University.

In 1981-82, the University won four All India Inter-Varsity Tournaments in Athletics (Men), Basketball (Women), Gymnastics (Women) and Weight Lifting, Six Runners-up positions in Basketball (Men), Athletics (Women), Gymnastics (Men), Hockey (Women), Cricket (Men) and Cricket (Women) while the University won five third positions in Boxing, Badminton (Women), Wrestling, Volleyball (Women) and Football. Ten outstanding sportsmen and women of this University represented the country in the international competitions during this year. Thirty-three NSO scholarships were awarded to the outstanding players/athletes of this University.

Field stations in 29 Varsities

A new scheme in the name of "FIELD STATIONS" has been introduced by the NS, NIS, Patiala. This is being operated upon by the NIS in collaboration with the Association of Indian Universities. Under this scheme, the NIS provides five coaches to each university, where the field station is opened, free of cost. The University provides the necessary infrastructure at its own cost. The NIS coaches impart training to the outstanding sports men/women of the concerned university.

Till now, 29 Field Stations have been opened at the various University Centres. The main criterion for opening a Field Station is that the university should have a teaching Department of Physical Education or an exclusive Department of Sports.

News from Abroad

New Bill on higher education adopted by France

It terms of a new Bill on Higher Education adopted by France, a new French Doctorate has been introduced. It will be of a higher level than that of the present 3rd cycle Doctorates. It will be the basic evaluation element for recruitment of future assistant professors.

The new Doctorate will consist of a DEA (Advanced Studies Degree) and two to four years of original research leading to defence of a thesis or research work. It will be awarded by a university whose name will be mentioned on the degree. The members of the jury will be drawn from outside the university.

The Bill institutes a qualification for guiding research which will be required for reaching the grade of Professor. Two recognition levels of the 3rd cycle—ability for research and ability to direct research—are maintained. Corresponding to the first level will be the grade of Doctor, this being the only national title of Doctor. The qualification for guiding research appears at the second level.

This qualification will be issued by a university which appoints a jury of Professors or competent authorities comprising members from outside the university after a defence of all publication, consisting in principle of all work done after doctorate. The candidate should prove his ability to train young researchers. This qualification will be required for reaching the grade of Professor.

An amendment also provides that the authorisation of the universities to confer degrees will be issued without a time limit. The powers of the university Presidents are also increased.

Further information can be had from the National Education Ministry, 110 rue de Grenelle 75357, Paris-France.

[*Source*: Indo-French Journal, March-June, 1984]

In University at 13

The 70-year old University of Philippines has admitted a 13 year old boy for pursuing a 4-year Bachlor's Degree Course in Mathematics and Physics, it is reported.

The candidate has not even finished High School. He did not also appear at the Admission Test. The Board of Regents of the University took the decision to admit the boy which has been described as an "unprecedented event."

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies, Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

HUMANITIES

Philosophy

1 Ashok Kumar *Ethics of John Dewey in the context of social change in U.S.A. in the 20th century.* BHU, Varanasi.

2. Dubey, Asha. *Logic of imperatives and its significance in moral reasoning.* U Raj, Jaipur.

3. Krishnamurthy, B.N. *Some issues in Sankara Vedanta.* Kar U, Dharwad.

4. Roy, Suprasad. *A critical examination of the concept of personal god in Vaishanavism.* Gauhati U.

5. Upadhyaya. Radhey Shyam. *Srimad Bhagvat Geeta evam adhunik jeewan.* BHU, Varanasi.

Fine Arts

Music

1. Khale, Suhasini. *Madhya Pradesh mein shastriya sangeet ke itihasik prayvekshan: Mudhyakal se vartman kal tak.* Bhopal U.

Language & Literature

English

1. Bandyopadhyay, Debnarayan. *Inter-relation of horation and longinian element in eighteenth century.* U Calcutta.

2. Raja Rao, E. *Beyond protest : A critical examination of contemporary Afro-American fiction.* Utkal U, Bhubaneswar.

3. Routh, Nikunja Behari. *H.L. Mencken : A study of his literary criticism.* RSU, Raipur.

4. Sengupta, A.K. *Browning as Dramatist.* Bhopal U.

5. Shastri, R. Gopalan. *Sri Aurobindo's Savitri in the light of his 'The Future Poetry'.* Nagpur U.

6. Siddhu, Paramjit Kaur. *Influence of english on punjabi language.* Bhopal U.

7. Subba Rao, V.V. *William Golding : A study.* SKU, Anantapur.

Sanskrit

1. Budhani, Indu. *Kalidas ke purush patron ka manovaigyanik adhyayan.* Kum U, Nainital.

2. Hema Krishnan, K. *Kuntak ka vakroktijivit alankarshastra mein Acharya Kuntak kee den ka sameekshatmak adhyayan.* BHU, Varanasi.

3. Joshi, Labhashankar Mohanlal. *Lalita Sahasranama stotra: A study in the light of the commentary of Bhaskaraya Makhindra.* MSU, Baroda.

4. Kashyap, Rajendra Prasad. *Atharvaveda kaleen Bharat ka bhaugolic adhyayan.* BHU, Varanasi.

5. Pathak, Kailash Nath. *Prabodhchandrodaya ka sameekshatmak adhyayan.* BHU, Varanasi.

6. Saxena, Ram Kumari. *Shreekanth charit : Ek sahityik adhyayan.* BHU, Varanasi.

7. Sharma, Krishna Kant. *Vrishabhadeo krit Vakyapadiyatika ka alochanatmak adhyayan.* BHU, Varanasi.

8. Singh, Alok Narayan. *Upnishadon mein ayurvedic samagri ka vivechanatmak adhyayan.* BHU, Varanasi.

9. Suntharalingam, V. *Abhinava Gupta's conception of humour: Its resonances in sanskrit drama, poetry, hindu mythology and spiritual practice.* BHU, Varanasi.

10. Upreti. B.P. *Mahakavi Vishwanath Keshav Chhatre ke mahakavyon ka alochanatmak adhyayan.* Kum U, Nainital.

11. Usha Devi. *Udayan kathasrit sanskrit roopakon ka sameekshatmak adhyayan.* BHU, Varanasi.

Pali

1. Jain, Vijay Kumar. *Samyutta-nikaya: Ek adhyayan.* BHU, Varanasi.

Hindi

1. Ansuiya Devi. *Hindi gadya sahitya ke vikas mein Jabalpur ke sahityakaron ka yogdan* 1900-1910. RDV, Jabalpur.

2. Chandhok, Chandrakant Ranbirraj. *Prem Chand tatha Sane Guruji ke sahitya mein nirupit samajik samasyaon ka tulnatmak adhyayan.* SPU, Vallabh Vidyanagar.

3. Deo Kumar. *Ramcharit Manas: Adhunik sandarbh.* BHU, Varanasi.

4. Mishra. Raj Bihari. *Premchand ke upanyason ka samajik yatharth*. BHU, Varanasi.

5. Muhammed K. *Sociological study of the hindi Sufi kavyas*. U Calcutta.

6. Muley, Shashikala Mahadev. *Hindi aur Marathi ke muhavaron ka tulnatmak adhyayan*. Kar U, Dharwad.

7. Pandey, Bhola Nath. *Swantantarayottar hindi upanyas mein ranjnaitik, samajik chetna ka vikas*. BHU, Varanasi.

8. Pandey. Nandini. *Adhunik hindi kavya natakon ka vishleshanatmak anusheelan*. BHU, Varanasi.

9. Singh, Jitendra Kumar. *Sathottary hindi kahani mein rajniti*. Mag U, Bodh Gaya.

10. Singh, Satya Narain. *Hindi Ramkavya parampara aur Acharya Kavi Keshavdas*. BHU, Varanasi.

11. Singh, Surendra Pratap. *Premchand ke katha-sahitya mein madhyavarg*. BHU, Varanasi.

12. Singh, Vijai Bahadur. *Nibandhakar Acharya Hazri Prasad Dwivedi*. BHU, Varanasi.

13. Tiwari, Krishnanand. *Hindi ke rekhachitra sansmaran rath-yatravivaran evam reportaj sambandhi sahitya ka anusheelan*. BHU, Varanasi.

14. Tiwari, Shesh Nath. *Rageya Raghav: Vyaktitva aur unke upanyas*. BHU, Varanasi.

15. Upadhyaya, Shivanath Pd. *Ramayan aur Mahabharat mein Shakun vichar*. BHU, Varanasi.

Urdu

1. Ansari, Khalique U. *Nai (Urdu) Nazmi aur ghazal kee samt-o-raftar 1960 ke bad*. Nagpur U.

2. Shaikh, Afsar Janan Begum. *Ismat Chughtai shakheyat aur fan*. Nagpur U.

Bengali

1. Bagchi, Sanatkumar. *Rabindra-chintay-Sristite Bharat, itihas*. U Calcutta.

2. Roy, Brajagopal. *Kaliprasanna Ghosh : Samaj chinta-o-Godyaritir bichar*. U Calcutta.

Assamese

1. Thakuria, Ram Charan. *The Ramayana of Madhava Kandali—a text: Critical and historical study/four Kandas of Ramayana, viz Ayodhya, Arayana, Kiskindhya and Sundara Kandas*. Gauhati U.

Oriya

1. Baliarsingh, Sakuntala. *Oriya sahityare jaityabadi chetana*. Utkal U, Bhubaneswar.

2. Behera, Harish Chandra. *Prachina oriya geeti kavitare Sri Jagannath*. Utkal U, Bhubaneswar.

3. Dash, Sitanshu Kumar. *Oriya sahityare avatara-bada*. Utkal U, Bhubaneswar.

4. Dwivedi, Pramod Kumar. *Pandita Nilakanthanka kavya pratibha*. Utkal U, Bhubaneswar.

5. Mishra, Swarajya Lakshmi. *Oriya Jagannath sahitya-o-niladri mohotsaba*. Utkal U, Bhubaneswar.

6. Mohanty, Braja Mohan. *Oriya sahityaku akashavanira dana*. Utkal U, Bhubaneswar.

7. Parida, Susama Kumari. *Oriya sahityare satyabadi yuga*. Utkal U, Bhubaneswar.

Marathi

1. Dabir, Dilip Digambarrao. *Marathi kirtan sahitya: Ugam, vikas, parampara*. Nagpur U.

2. Diwan, Manohar Apparao. *Dictionary of the words in the seven poetic works of the Mahanubhavas and the study of the morphology and the meanings of the old words therein*. Shivaji U, Kolhapur.

Kannada

1. Noronha, Edward. *Contribution of the Christian Missionaries to the religious literature in kannada*. U, Mysore.

Telugu

1. Obi Reddy, K. *Navanatha charitra-okapariseelana*, SKU, Anantapur.

Geography

1 Bandyopadhyay, Saswati. *Sericulture in West Bengal : A geographical analysis*. U Calcutta.

2. Barua, Radhikacharan. *Rural settlement geography of the district of Jalpaiguri, North Bengal (West Bengal)*. NBU, Rajarammohunpur.

3. Chattaraj, Sumanta. *Emerging patterns of agricultural land use in Kamrup District 1964-65 to 1974-75*. NEHU, Shillong.

4. Jain, Bharat Bhushan. *Geohydrology and groundwater resources of Bulandshahr District: A geographical study*. BHU, Varanasi.

5. Jha, Vibhash Chandra. *Himalayan Ramganga Basin: A geomorphic study*. BHU, Varanasi.

6. Khadake, Suryakant Ganpatrao. *A geographical analysis of village and cottage industries in Kolhapur District*. Shivaji U, Kolhapur.

7. Khanka, L.S. *Kumaun Lake Region: A micro regional study specially physico-limnological analysis of Naina and Bhilangana Lakes*. Kum U, Nainital.

8. Nandi, Manika. *Landform development of Tripura/ West of Baramura range and North of Sonamura-Udaypur Amarpur towns*. U, Calcutta,

9. Panda, Prakash Ch. *Geomorphology and rural settlements in Khasi and Jaintia Hills, Meghalaya*. NEHU, Shillong.

10. Pandey, R.K. *Study of law and order in Bhilangana Catchment: A morphometric approach*. Kum U, Nainital.

11. Puttaiah, Dodda. *Role of sericulture in rural development: A case study of Mysore District*. U, Mysore.

12. Sahu, Rangadhar. *Diffusion and distributional patterns of high yielding varieties of rice in the lower Brahmaputra Valley*. NEHU, Shillong.

History

1. Asiya Begum. *Society and culture unde rthe Bijapur Sultans*. U Mysore.

2. Choudhary, Darshan Lal. *Violence in the freedom movement of Punjab*, 1907-1942. U Jammu.

3. Dena Lal. *Christian missions and colonialism: A study of missionary movement in Manipur and Lushai Hills, 1894-1947.* JNU, Delhi.

4. Isri, R. *Surgery in ancient India.* Mag U, Bodh Gaya.

5. Rao, Manjushri. *The Sanchi sculpture: An aesthetic and cultural study.* Bhopal U.

6. Ray, Himanshu Prabha. *The impact of trade on the Western Deccan during the satavahana period.* JNU, Delhi.

7. Rout, K.C. *A history of local self government in British Orissa,* 1869-1935. Berhampur U.

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UNIVERSITY OF DELHI

Advt. No. Estab. IV/89/84 Dated : the 27th June, 1984.

Applications on prescribed form are invited for the following posts:

Department	Designation	
1. Management Studies	One Professor	
2. Chinese & Japanese Studies	Two Lecturers (One in Japanese Language and another in Japanese Economics)	
3. Music & Fine Arts	(i) Two Professors (One each in Hindustani Music and Karnataka Music) (ii) Three Readers (One each in Hindustani Instrumental Music and Karnataka Music-Vocal). (iii) Six Lecturers (Three in Hindustani Vocal Music, 2 in Hindustani Instrumental Music and one in Karnatak Music).	
4. Psychology	(i) One Reader in Applied Psychology (For South Campus) (ii) Three Lecturers (Two in Applied Psych. for South Campus)	
5. Zoology	One Research Associate.	
6. Physics & Astrophysics	(i) *Two Technicians (Liquid Helium Plant) (One each reserved for Ex-Sm. and Scheduled Caste) (ii) *One Junior Mechanic (Stores)	
7. Genetics	(i) One Professor (ii) One Reader (iii) One Lecturer	(For South Campus)
8. Microbiology	(i) One Professor (ii) One Reader	(For South Campus)
9. Biochemistry	(i) One Professor (ii) One Reader (iii) One Lecturer	(For South Campus)

Scale of Pay of the posts are:

Professor Rs. 1500-60-1800-100-2000-125/2-2500.

Reader : Rs. 1200-50-1300-60-1900.
Lecturer : Rs. 700-40-1100-50-1600.

Research Associate : Consolidated monthly emoluments as under :

A-Rs. 1100/-p.m. (fixed)
B-Rs. 1300/-p.m. (fixed)
C-Rs. 1500/-p.m. (fixed)
On the recommendation of the Selection Committee.

Technician Rs. 550-25-750-EB-30-900.

Jr. Mechanic (Stores) Rs. 330-10-380-EB-12-500-EB-15-560.

All posts carry D.A., C.C.A. and H.R.A. as admissible under the rules in force in the University from time to time.

Essential Qualifications
Professorship

An eminent scholar with published work of high quality actively engaged in Research. Ten years' experience of teaching and/or research. Experience of guiding Research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Readerships

Good academic record with at least second class Master's degree in a relevant subject with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research, or (ii) innovation in teaching methods or (iii) production of teaching materials.

Five years' experience of teaching in under-graduate/post-graduate classes and/or post-doctoral research work with evidence of published work.

Note

Second Class would mean at least 50% marks in the subject or equivalent grade.

Lectureship in Music

(a) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject or an equivalent degree or diploma recognised by the University; and

(b) Two years research or professional experience or evidence of creative work and achievement in his field of specialization or a combined research and professional experience of three years in the field as an artist of outstanding talent.

OR

A traditional or a professional artist with highly commendable professional achievement in the subject concerned.

Explanation

For determining "good academic record" the following criteria shall be adopted:

(i) A candidate holding Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

Lectureship in Japanese Studies

(a) A Doctor's degree or research work of an equally high standard; and

(b) Good academic record with atleast second class (C in the seven point scale) Master's degree from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degree in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a good academic record may be appointed provided he has done one year post M.A. diploma course in the teaching of foreign language concerned from a university on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within eight years' of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

Explanation

For determining "good academic record" the following criteria shall be adopted.

1. (i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in bachelor's degree;

OR

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

2. Persons having secured marks more than the mid point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a University shall be deemed to have passed that examination in the high second class.

Lectureship in Psychology/Genetics and Biochemistry

(a) A Doctorate's degree or research work of an equally high standard; and

(b) Good academic record with atleast second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M.Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increment until he fulfils these requirements.

Explanation

For determining "good academic record" the following criteria shall be adopted.

1. (i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

2. Persons having secured marks more than the mid point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a University shall be deemed to have passed that examination in the high second class.

Research Associate

Consistently Good academic record with first or high second (B+) Master's Degree or an equivalent degree of a foreign University in the subject concerned.

Note: Initial appointment will be for a tenure period of three years extendable by another two years only. In no case the tenure extend beyond 5 years in all.

Technician

(a) Diploma in Mechanical Engineering with five years' experience.

(b) Must be capable of working on lathe milling machines, Surface grinders, Shapers and knowledge & experience in running, maintenance & fitting of compressors of various appliances etc.

Junior Mechanics (Stores)

(i) I.T.I. Diploma or equivalent in Machine Shop/Workshop Mechanics.

(ii) Three years experience in handling stores.

Special/Desirable qualifications

Professorship in Management Studies

Specialization in Operations Management/Small Business Management/Managerial Economics.

Readership in Applied Psychology

Evidence of advanced research in any of the following areas:—

Applied Social Psychology, Applied Experimental Psychology, Community Mental Health, Industrial/Organizational/Environmental Psychology.

Lectureship in Japanese Language

Acquaintance with modern methods of Japanese language teaching.

Lectureship in Japanese Economics

(i) M.Phil in Japanese studies with special reference to Japanese economic problems.

(ii) Proficiency in Japanese language.

Lectureship in Psychology

Specialization in Psychometrics or Clinical Psychology

Research Associate - Zoology

Specialization in any one of the following:—

Cell Biology, Endocrinology, Entomology, Fish Biology, Animal Ecology, Developmental Biology, Histochemistry, Animal Behaviour.

Professorship and Readership in Music:

Good performing ability with a comprehensive repertoire of traditional ragas and forms.

Lectureship in Music

1. Atleast four years teaching experience in a chartered University.
2. Competency in performance of traditional ragas and forms.

Technician

Knowledge and experience of Refrigeration machinery, running & maintenance of liquifiers etc.

The prescribed application forms can be had from the Information Section of the University either personally or by sending a self-addressed envelope (size 13cm× 28cm) with postage stamps worth Rs. 3.45 p.

The candidates will have to produce the original documents relating to their age, qualifications, experience etc. at the time of interview.

Applications (separate for each post) accompanied by attested copies of Degrees, other certificates, marksheets, published research articles, etc. should be addressed to the Registrar. However, for the posts marked asterik(*) should be sent directly to the Head of the Department concerned. The last date prescribed for receipt of the application is **28-7-1984**.

Note

1. It will be open to the University to consider the names of suitable candidates for teaching posts who may not have applied. Relaxation of any of the qualifications may be made in exceptional cases, in respect of all teaching posts on the recommendations of the Selection Committee.
2. Canvassing in any form by or on behalf of the candidates will disqualify.
3. Candidates from outside Delhi, for teaching posts only, called for interview will be paid to and fro single side second class rail fare
4. The University reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant.

Madan Mohan
REGISTRAR

NAGARJUNA UNIVERSITY : NAGARJUNA NAGAR 522 510

No. NU/TS/Estt. ./84 85

Dated : 21.6. 1984.

ADVERTISEMENT

Applications are invited in the prescribed forms for the following posts in the University service on or before **31-7-1984**.

Department	Post	Specialisation
History & Archaeology		
	(i) Reader	Epigraphy & Andhra History
	(ii) Reader	Pre-history & Environmental Archaeology/Analytical Archaeology.
	(iii) Reader	Modern Indian History/History of South Asia or East Asia.
	(iv) Lecturer	Medieval Indian History/History of West Asia.

1	2	3
Economics	(i) Reader	Commercial Banking/ Economic Demography.
	(ii) Reader	Mathematical Equations & Econometrics.
	(iii) Lecturer	Rural Development.
English	(i) Professor	Indian Writing in English/American Literature/Commonwealth Literature.
	(ii) Reader	Commonwealth Literature.
	(iii) Reader	Comparative Criticism in Cooperation with Telugu & Sanskrit.
B st Studies	(i) Professor	
	(ii) Reader*	
	(iii) Lecturer	
	(iv) Lecturer	
	(v) Lecturer *temporary	
Political Science & Pub. Administration	(i) Reader	
	(ii) Reader	
	(iii) Reader	
	(iv) Reader	Field work
	(v) Lecturer	
	(vi) Lecturer	Political Theory/Marxian Studies.
	(vii) Lecturer	Disaster Management
	(viii) Lecturer	Modern Indian Politics/State Politics.
Telugu	(i) Professor	
	(ii) Reader	Comparative Criticism/Comparative literature.
Commerce	(i) Professor	Industrial Relations/Marketing
	(ii) Reader	
	(iii) Reader	Marketing.
	(iv) Reader	Advanced Banking.
Law	(i) Professor	International Law.
	(ii) Professor	Labour Management Relations.
	(iii) Reader	Preference will be given for candidates who have studied Research Methodology and law and Social change as subject in ML).
	(iv) Lectu	Labour Management Relations with Legal Education.
	(v) Lecturer	Preference will be given to those who have specialised in any one of the following subjects: (a) Taxation (b) Property Law (c) Jurisprudence and (d) Family Law.
Botany	(i) Professor	Reproductive/Developmental Botany.
	(ii) Reader	Plant Physiology/Plant Genetics.
Chemistry	(i) Professor	Inorganic Chemistry
	(ii) Reader	Physical Chemistry
Geology	(i) Professor	
	(ii) Reader	
Mathematics	(i) Professor	
	(ii) Reader	
Physics	(i) Professor	Solid State Physics/Liquid Crystals/ Solar Energy.
	(ii) Reader	Solid State Physics.
	(iii) Reader	Liquid Crystals.
Zoology	(i) Professor	Fish Physiology/Environmental Biology.
	(ii) Lecturer	Systematics/Limnology/Fishery Biology/Aquaculture.
Statistics	(i) Reader	
	(ii) Reader	
	(iii) Lecturer	
	(iv) Lecturer	
	(v) Lecturer.	

The rule of reservation (15% for Scheduled Castes, 7.5% for Scheduled Tribes and 25% for Backward Classes) including earmarking (roster system) and carrying forward of the vacancies is applicable to all the posts of Readers and Lecturers.

The earmarking of these vacancies among the S.Cs., S.Ts. and B.C.s, (A.B.C.D groups) and for open competition will be done in accordance with G.O.Ms. No. 927 Edn., dated 20-11-1982; 995 Edn., dated 16-12-1982 and G.O.Ms. No. 117 Edn. (c) dated 5-3-1983 of the Government of Andhra Pradesh at the time of actually filling up the vacancies.

Scales of Pay

Professor: Rs. 1500-60-1800-100-2000-125/2-2500.

Reader : Rs. 1200-50-1300-60-1900.

Lecturer : Rs. 700-40-1100-50-1600.

Age

Lecturers: Not above 35 years.

Note

Relaxation in age to the extent of 5 years shall be granted to the candidates belonging to SC/ST/BCs.

The details of qualifications prescribed will be furnished along with the application form. Six copies of prescribed application forms and other particulars can be had from the Registrar, Nagarjuna University, Nagarjunanagar-522 510, Andhra Pradesh on payment of Rs. 6/- by State Bank of India Challan/Demand Draft/Crossed Indian Postal Order (payable at the Nagarjuna University Campus Post Office only) of the said value drawn in favour of the Registrar, Nagarjuna University, Nagarjunanagar 522 510, Andhra Pradesh.

The University reserves to itself the right to fill up or not to fill up any or all the posts. Defective and late applications will be rejected. In cases where specialisation is specified candidates not specialised in those fields need not apply.

Persons already in service should send their applications through proper channel. Applications received after 5.00 P.M. on **31-7-1984** will not be entertained.

Candidates called for interview have to attend the same at their own expense.

K. Anjanappa
REGISTRAR

INDIAN INSTITUTE OF SCIENCE
BANGALORE-12

Advertisement No. R(IA) 308-20/84
Dated: 22nd June 1984

Applications in the prescribed form are invited from SCIENTISTS with proven ability and R&D interest to fill up the post of PROFESSOR in the Instrumentation Services Unit at the Institute, in the grade Rs. 1500-60-1800-100-2000-125/2-2500 plus allowances at the Central Government rates prevailing at the Institute from time to time. Emoluments at the minimum of the scale total to Rs. 2735/- per month excluding House Rent Allowance. (HRA maximum payable is 15% of pay limited to Rs. 400/- subject to the employee meeting up to 10% of pay or on a flat rate of Rs. 159.75 p.m.).

Qualifications and Experience

Essential : Doctorate in Science/Engineering or Technology with at least Ten years of R&D experience in Instrumentation.

Desirable : The candidate must have a distinguished record of R&D work in instrumentation problems in the areas of optical, electronics, analytical or other aspects of instrumentation.

Job Description

The candidate would be expected to provide leadership in R&D in the areas of interest and approved programmes of Instrumentation Services Unit. The Selected candidate would also take part in the teaching activities as well as provide assistance/collaborative help to other workers in the Institute.

Relaxation

The stipulation regarding qualifications and the number of years of relevant experience is relaxble at the discretion of the competent authority in the case of candidates possessing exceptionally good record and outstanding capabilities.

Tenure of Appointment

Normally, all new appointments at the Institute are made on contract for periods of five years including an initial probationary period of one year. If, at the end of the first contract, the work and progress of the candidate is found satisfactory, the Institute may consider offering a continuing appointment till the age of superannuation, i.e. 60 years.

General

Application forms (six copies) can be obtained from the Registrar, Indian Institute of Science, Bangalore 560 012, on requisition. Each request for application forms should be accompanied by a crossed Indian Postal Order for Rs. 5/- (non-refundable) made payable to the Registrar, together with a self-addressed stamped (Rs. 3.30) envelope of the size of 28 cms. x 18 cms. The payment of application fee is exempted in the case of candidates belonging to Scheduled Castes/Scheduled Tribes on production of certificate from a competent authority.

The last dates are

(a) For issue of application forms **21st July 1984.**

(b) For receipt of completed application forms **13th August 1984.**

Applicants in the service of Government, Quasi-Government, Government-aided or similar institutions should apply through proper channel. Otherwise, their application will not be considered.

It shall be open to the Selection Committee for a higher post to recommend a person for a lower post if a suitable candidate for the higher post is not available.

Due consideration will be given to candidates who are physically handicapped provided they are academically/scientifically sound and well qualified and generally comparable to others.

Higher starting salary may be considered to candidates with exceptional merit.

Kindly quote the advertisement No. and date in all correspondence. Candidates should ensure that applications are complete in all respects.

Detailed terms and conditions of appointment will be supplied along with the application forms.

T. Nanjunda Rao
REGISTRAR

BHOPAL UNIVERSITY
BHOPAL

Advertisement No. 2/84/BU/ESTT

Applications on prescribed form obtainable from the Registrar by sending self-addressed envelope with Rs. 3.50 p. stamps affixed are invited for the following posts so as to reach the Registrar on or before **20-7-84**.

2. Applications should be accompanied with a crossed IPO of Rs. 10/- for the post of Professor/Reader/Lecturer in favour of Registrar, Bhopal University, Bhopal.

1. Professor

One each in Arabic/Persian/Limnology/Genetics/Commerce/Microbiology/Physics/Zoology (Inland Fisheries.)

2. Reader

One each in Law/Psychology/Geology/Commerce / Sanskrit / Bio - Chemistry/Computer Science and Applications/Physics.

3. Lecturer: Law-Two/Psychology-Two/Commerce-Three/Sociology-Three/Geology-Two/Arabic-One/Persian-One/Sanskrit-One / Linguistics-One / Limnology-One/Regional Planning and Economic Growth-Two (One post temporary)/Computer Science and Applications-Two/Physics-Two/Genetics-one/Bio-Science (Bio-chemistry)—One.

Minimum Qualification & Experience for the post of (1) **Professor** (a) First or Second Class Master's degree of an Indian University or an equivalent qualification of a foreign University in the Subject concerned. (b) Should be an eminent scholar having published work and 10 years Teaching/Research Experience. (2) **Reader** (a) First or second class Master's degree of an Indian University or an equivalent qualification of a foreign University in the subject concerned. (b) Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in Research, with five years experience of Teaching/Research. (3) **Lecturer** (a) First or second class Master's degree of an Indian University or an equivalent qualifications of a foreign University in the subject concerned. (b) Doctor's degree or Research work of an equally high standard. Good academic record.

Good academic record will be determined as per UGC rules. Pay Scale and age limit will be as per UGC rules.

The details of Branch of specialisation and other desirable qualifications will be supplied alongwith the prescribed form.

No TA/DA will be admissible to the candidates if called for interview. The Selection Committee may consider the candidature of any eminent/suitable persons in absentia.

Note

Persons who had already applied with reference to earlier advts. for the post of Professor, Microbiology/Commerce need not apply.

M.N. Bhouraskar
REGISTRAR

UNIVERSITY OF JAMMU
JAMMU

Applications on prescribed forms are invited for the following posts so as to reach the undersigned on or before **10-8-1984:**

1. Professor of Urdu (Rs. 1500-2500), one post.
2. Professor of Pol. Science (Rs. 1500-2500); one post (lien bound vacancy).
3. Reader in Mathematics with specialization in Modern Algebra (Rs. 1200-1900); one post.
4. Reader in Laws with specialization in Criminology and Police Science (Rs. 1200-1900); one post.
5. Lecturer in Mathematics (Rs. 700-1600); one post.
6. Senior Scientific Officer Instrumentation Centre (Rs. 1100-1600); one post.
7. Computer Programmer (Rs. 500-800); one post.

Prescribed application forms and other details can be had from Shri Vachaspati Sharma, Assistant Registrar (Forms & Stationery) by sending a self-addressed envelope (25cms× 10 cms) bearing postage stamps worth Rs. 4.00 alongwith crossed postal order worth Rs. 20.00 drawn in favour of the Registrar, University of Jammu, Canal Road, Jammu (Tawi)-180001 encashable at Jammu Post Office.

K.K. Gupta
REGISTRAR

UNIVERSITY NEWS, July 8, 1984 Regd. No. R. N. 7180/63 Post Regd. No. D(C)-1086

GURUKULA KANGRI VISHWAVIDYALAYA

HARDWAR

No. GKV/Estt 84 Dated: June, 1984

Advertisement

Applications with passport size photographs (six copies) on plain paper giving complete bio-data supported by attested copies of testimonials, certificates, etc. are invited for the following posts so as to reach the undersigned with crossed postal order of Rs. 10/- payable to Registrar, Gurukula Kangri Vishwavidyalaya at Gurukula Kangri Post Office, upto **15th August, 1984**.

1. Professional Assistant (Library): Grade: Rs. 570-1100.

Qualifications

1. Second Class Bachelor degree together with second class Bachelor's degree in Library Science.

Desirable

(i) Two years' working experience of a University Library.

(ii) Knowledge of typing.

2. Yog and Physical Instructor: Grade: Rs. 570-1070.

Qualifications: Essential

1. Bachelor Degree in Arts/Science/Commerce.
2. Diploma/Degree in Yog and Physical Education.

Desirable

(i) Experience in conducting yogic classes/Yog camps.

3. Museum Assistant: (Archaeology) Grade: Rs. 690-1420.

Qualifications: Essential

1. Post Graduate Degree in Ancient Indian History, Culture & Archaeology.
2. Diploma in Archaeology or 5 years experience in the field work of Archaeology.

Desirable

1. Knowledge of Sanskrit and Brahmi.

Note

1. Female candidates need not apply.
2. Qualifications may be relaxed by the Selection Committee in the case of candidate with outstanding record of teaching and research.
3. Higher start may be given to deserving candidates.
4. Applicants should give names and addresses of two referees not related to them.
5. Knowledge of Hindi is essential.
6. Only vegetarian and non-smoker candidates should apply.

Virendra Arora
REGISTRAR

ALIGARH MUSLIM UNIVERSITY

ALIGARH

Corrigendum

For the post of Lecturer in Bio-Chemistry, Department of Bio-Chemistry, J.N. Medical College Advertised vide Advertisement No. 8/84-85 the following note may please be read as under :

1. Only the candidates who possess medical qualifications need apply.
2. Those who have applied in response to the General Advertisement No. 38/83-84 for the Post of Lecturer in Bio-Chemistry, Department of Bio-Chemistry, need not apply again. They will be considered on the basis of their 'previous applications if eligible.

Zamir Ahmed Khan
REGISTRAR

ZAKIR HUSAIN (EVENING) COLLEGE

AJMERI GATE, DELHI - 110006

Applications are invited for the following posts:

1. Lecturer in History—1 in leave vacancy Rs. 700-1600.
2. Junior Assistant—One Permanent.

Qualifications for Lectureship

(a) Doctorate's degree or research work of equally high standard.

(b) Good academic record with at least second class (C in seven point scale) Master's Degree in relevant subject from an Indian or foreign University. Having regard to the need for developing inter-disciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his/her thesis or from published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's Degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M.Phil or equivalent degree or research work of quality) may be appointed provided he/she has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he/she will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his/her appointment, failing which he/she will not be able to earn future increments until he/she fulfils these requirements.

Application forms available with the College Office between 5 and 8 p.m. on working days. Those asking for the forms by 'post should send a self-addressed stamped envelope of 11"x5" size. The College reserves the right to increase number of temporary vacancies.

Last Date for receipt of applications is **July 21, 1984**. Those called for interview from outstation may be paid single one-way second class Railway fare on production of Railway Ticket or receipt.

Qualifications for Junior Assistant

Must have passed Senior Secondary Certificate Examination with a typing speed of 40 w.p.m. in English.

Desirable: Knowledge of Hindi & Urdu with previous experience.

Hand written applications stating educational qualifications, age, sex, speed in English typing, languages known and previous experience etc. must reach by **21-7-1984**. No. TA/DA admissible.

UNIVERSITY OF CALICUT

Calicut University P.O.

No. Ad. F2/2136/84

Dated : 22-6-1984

Vacancy of Registrar—Re-Notification

1. Applications are invited from qualified candidates for appointment to the post of REGISTRAR of the University of Calicut. The post carries the Scale of Pay Rs. 1650-75-2175 and usual allowances.

2. Candidates should have a first class or second class Post Graduate degree and 5 years teaching experience at University level and about 5 years of administrative experience in a responsible post including management of staff in a University or College or similar institutions.

Age : Between 40 and 50 years as on 1st of January, 1984.

3. Applications on plain paper containing details of qualification, experience, age etc., along with true copies of relevant certificates and a crossed Postal Order of Rs. 10/- drawn in favour of the Finance Officer, University of Calicut and payable at Calicut University Post Office should reach the undersigned on or before **31-7-1984** during office hours.

REGISTRAR

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University News

JULY 16, 1984

Re. 1.00

Administrative Building of University of Cochin inaugurated by His Excellency Shri P. Ramachandran, Chancellor and Governor of Kerala on July 10, 1984.

CLASSIFIED ADVERTISEMENT

INDIAN INSTITUTE OF SCIENCE

BANGALORE 560012

Advertisement No. R(IA)308-22/84

Dated : 28th June, 1984

Applications in the prescribed form are invited for the post of SCIENTIFIC OFFICER (Area : Process Metallurgy) in the Department of Metallurgy at the Institute in the grade Rs 700-40-1100-50-1300 plus allowances admissible at Central Government rates prevailing at the Institute from time to time. Emoluments at the minimum of the scale total Rs 1801.95/- per month (including House Rent Allowance).

Qualification and Experience

Essential

A Master's Degree in Materials Technology/Process Metallurgy followed by atleast 2 years experience in the maintenance of a Mechanical Processing Laboratory/Electroslag Refining/Special Melting Techniques Laboratory.

Desirable

Experience in organising Laboratories for Research in the above areas, construction and development of various apparatus and independently conducting experiments.

Job Description

The selected candidate would work in any or all the above areas of work and is expected to maintain various sophisticated items of equipment and interface with the user community.

He would provide assistance to users of the facilities in its operational aspects and assist in support of academic programmes.

He can avail of the opportunities for Institute conferments as per Institute rules after the stipulated period of satisfactory service and with the approval of the authorities.

Reservation

The post of Scientific Officer is reserved for candidates belonging to SCHEDULED CASTES. However, if qualified candidates belonging to Scheduled Castes are not available other applications of general candidates will be considered as per rules.

Relaxation

The requirement regarding experience is relaxable at the discretion of the competent authority in the case of Scheduled Caste candidates.

Tenure of Appointment

Normally, all new appointments at the Institute are made on contract for periods of five years including an initial probationary period of one year. If, at the end of the first contract, the work and progress of the candidate is found satisfactory, the Institute may consider offering a continuing appointment till the age of superannuation, i.e. 60 years.

General

Application forms (six copies) can be obtained from the Registrar, Indian Institute of Science, Bangalore 560012, on requisition. Each request for application forms should be accompanied by a crossed Indian Postal Order for Rs. 5/- (non-refundable) made payable to the Registrar, together with a self-addressed stamped (Rs. 3.30) envelope of the size of 28 cms × 18 cms. The payment of application fee is exempted in the case of candidates belonging to Scheduled Castes/Scheduled Tribes on production of certificate from a competent authority.

The last dates are

(a) For issue of application forms : **30th July, 1984**.

(b) For receipt of completed application forms: **16th August, 1984.**

Applicants in the service of Government, quasi-Government, Government-aided or similar institutions should apply through proper channel. Otherwise, their applications will not be considered.

It shall be open to the Selection Committee for a higher post to recommend a person for a lower post if a suitable candidate for the higher post is not available.

Due consideration will be given to candidates who are physically handicapped provided they are academically/scientifically sound and well qualified and generally comparable to others.

Higher starting salary may be considered to candidates with exceptional merit.

Kindly quote the advertisement No. and date in all correspondence. Candidates should ensure that applications are complete in all respects.

Detailed terms and conditions of appointment will be supplied along with the application forms.

T. Nanjunda Rao
REGISTRAR

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Asstt. Publication Officer

UNIVERSITY NEWS

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Opinions expressed in the articles and reviews are individuals and do not necessarily reflect the policies of the Association

Editor :
M. S. RAMAMURTHY

Outlay for Secondary Education

A working group of the Planning Commission has proposed an outlay of Rs. 1,828 crore for secondary education for the Seventh Plan, it is reported. This includes a sum of Rs. 304 crore for vocationalisation of higher secondary education on which great stress is being laid during the Seventh Plan. Of the total outlay for the vocational stream, Rs. 126 crore would be in the Central sector for a 100 per cent centrally sponsored scheme for 2,000 schools and Rs. 178 crore in the State sector for 5,000 schools.

Vocational education is proposed to be introduced in 7,000 schools, i.e. 14 per cent of total number of secondary schools.

The working group has recommended that all new schools at the plus two stage should have vocational courses related to local needs.

It has suggested that vocationalisation may be introduced in 400 schools per year on 100 per cent centrally assisted basis. More Central assistance may be given for introduction of the programmes for vocationalisation and for enlarging the coverage of the programme.

The group has suggested the setting up of boards of vocational education in each State on the lines of the all India board of vocational education.

The boards may suggest programmes of vocationalisation and perform the function of coordination.

Kerala's plan to register parallel colleges

The Education Minister of Kerala, while replying to the demand for grants of his Department in the Assembly recently, is reported to have said that the Government is considering a proposal under which all "parallel colleges" will have to get themselves registered. "Parallel Colleges" prepare students who fail to get admission to regular institutions to appear in various examinations as private students.

According to a survey conducted by the Education Department, there were 2629 "parallel colleges" employing 26,961 teachers with about 490,000 students on roll. As against this, regular colleges had 11,305 teachers with a total enrolment of a little over 200,000 students.

It was also proposed to lay down minimum qualifications for teachers in such "parallel colleges".

Haryana to switch over to 10+2 system

Haryana, it is reported, will switch over to 10+2 system with effect from 1 85-8 academic session.

During the last academic session the Technical Education Department had introduced the system in 4 schools on an experimental basis. This is being extended to another 4 schools this year, it is further reported.

Role of Universities in Rural Development : An Indian Perspective

T. Vasudev*

Rural Development has come to assume immense significance in the recent past. This increasing importance for Rural Development is a consequence of growing consciousness on the part of the rural people for greater share in the growing prosperity of the nation. This is also an indication of their ability to articulate their interests.

Rural Development is also important because of the fact that three-fourths of the population of India live in rural areas, 50 per cent of the National Income is generated in the rural sector and it supplies raw material for vital industries such as jute, sugar and cotton. In short, the pace of development of India is closely interlinked with rural development.

Several attempts have been made to accelerate the pace of rural development since Independence. The introduction of Community Development Programmes in 1952 and Panchayati Raj in 1959, and several other measures with regard to land reforms, abolition of bonded labour, payment of minimum wages for agricultural labour and improvement of backward classes and scheduled castes, scheduled tribes indicate the magnitude of the problem.

Owing to the expansion in the state activity there has been an explosion in the administrative activity in the rural sector. A host of new administrative institutions have sprung up in the wake of expanding administrative activities.

The performance of administrative machinery in the rural sector would have been more impressive had the administrative system been manned by those who have been sufficiently exposed to the complexities of the problems of rural development. The specialists who have specialised in areas such as agriculture, medicine, engineering and other courses seem to lack rural orientation. In view of these, there is a need to involve instructions of higher learning—mainly Universities, to direct the explosion of knowledge for a purposive action on the one hand and integrate the development processes on the other. In this paper an attempt is made to discuss the role of Universities in rural development, with special reference to India.

It is needless to emphasise that universities in the twentieth century are no more confined to a few sections of the society. They are open to all and in India even special reservations have been made to enable the down-trodden to join the institutions of higher learning, so that any person who is interested in it can make use of the opportunity. The Universities on the other hand also are enlarging their activities to design its programmes more relevant to the needs of the people and that of the region where it exists. The policy of the Government and also the University Grants Commission in India, during the recent years is to focus special attention on the growth of the Universities situated in rural areas. Hence, these universities would be in a better position to interact with a large number of rural population. Since a large segment of rural population is poor and a major section of them cannot afford to go to urban areas and obtain necessary qualifications. Due to this several talented people had to keep away from the institutions of higher learning. Hence, the universities should take their educational programmes to rural areas and people, so that they can justify their existence.

For a long time the thrust of University education is on 'General education' and that too at the higher levels. People could enter the University only after the completion of secondary education or Intermediate (Pre-University) courses. The situation in India indicates that not even five per cent of the people continue their education after the secondary stage. Added to it, there is a high percentage of stagnation and dropout rate at the school level itself. Thus the general background of these students who could come up to the University level indicate that they represent the somewhat well-to-do sections of the society. As a result of it the universities in India could serve only a limited number of population ignoring the mass of people.

It is true that the educational policy and its implementation at the lower level influence the higher education, both in feeding the students as well as providing a base for designing courses at the higher levels. Thus any change in the university education also proposes the need for a thorough overhaul of the entire educational system while providing an integrated educational policy for all levels so that wastage, stagnation, dropout rate, duplication of knowledge, could be avoided and formulation of relevant courses could be ensured. Thus, universities can serve better if the 'base'—the school education is made more rational and relevant to the needs of society.

Since the policy of the successive governments is to establish a socialist pattern of society, an integrated educational policy will help achieving this objective in a better way. In an integrated system of education, the universities then, should have to play a greater role even to strengthen the base of school education so that the successful candidates drawn from school level can shape up in a better

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Vice-Chancellor, Kakatiya University, Warangal way at the higher levels of education. Thus the universities may have to offer certain courses even to those students who study at the pre-university level. This may further require the expansion of the educational programmes of the university and bear a part of the burden of the pre-university education.

Since the universities now offer many courses in Social Sciences, Natural Sciences, Engineering, Technology and Medical Sciences and are equipped with talented staff being specialised in various fields of knowledge, their experience could be better utilised, if their programmes are made more relevant to the social needs. There is a general complaint on Indian Universities that the courses which are being taught, and the research that is being undertaken are not very relevant to the social needs. This may also be mainly because the universities themselves have no perspective of future requirements of education as well as existing resources. Thus the universities should have perspective plans and their thrust of education should be focussed on the needs and requirement of the region and the people—where it is situated. So that the courses would become more relevant, the research would become more needful and the existence of university more justified.

The above discussion indicates that the universities should have integrated educational policies while combining its programmes with school education and expanding its programmes to attract a large number of students drawn from the weaker sections of the society. Rational utilisation of the services of the university staff and formulation of more needful courses would further strengthen the universities to fulfil their social objectives in a better way. This would also avoid imbalanced growth of education and uneven development of literate and educated population. The case of university education would become more strengthened when its relation with rural development is further examined.

The universities in India have crucial role to play in Rural Development. The fact was recognised even before the independence. Leaders like Gopala Krishna Gokhale, Lala Lajpat Rai, Bal Gangadhar Tilak, Madan Mohan Malaviya and Mahatma Gandhi, to name a few, went to the extent of organising educational institutions for national development. Gandhiji has emphasised the need for training the youth in the educational institutions to prepare them to work for the rural reconstruction.

The situation however after independence, seems to be quite different. Except few institutions such as Gandhigram Rural Development Institute etc., which have taken keen interest in rural development, the universities in general have ignored the aspect. The Agricultural Universities have had a limited focus and perspective of covering only few aspects of Rural Development and seldom treated its Rural Development activities with an integrated approach.

Several years have passed since the Education Commission in India emphasised the role of education as an instrument of social change, but universities seldom recognised it to translate it into reality. Not even 5 per cent of the annual expenditure of more than Rs. 4,000 crores spent on higher education and Research laboratories, is being devoted to ensure the solutions towards the problems having a direct bearing on rural development. If the social change needs to be achieved in rural areas, the universities should involve itself in the analysis of rural problems, identification of avenues of development, formulation of strategies and preparing the people to actively participate in various Rural Development activities though offering specialised courses to various sections concerned and offer training courses for inservice candidates and undertaking action—research in various fields related to rural development.

Specialised Courses in Rural Development

Universities situated in Rural areas should offer various short-term and long-term courses in Rural Development specially designed to enable the student to face the rural challenges such courses would expose the students to the complexities of rural problems and enable them to evolve more effective strategies for rural development. Courses of this nature then should not be merely formulated from the point of view of a particular discipline but have a inter-disciplinary content and information. In the same way, courses should cover both theoretical and practical experiences of Rural Development. Students should know various models of development that exist in the world and understand the ideologies behind them. They should then attempt to understand the practical experience of various third world countries, followed by specific courses which provide basic information relating to the society, problems of rural set up, policy making, programmes undertaken for resolving the problems, Agencies responsible for the implementation of the programme and the performance etc. All these courses have to be offered with an integrated approach and a rational perspective. The duration of courses should depend upon the needs and requirements of region, where the university is situated.

Besides, short-term courses should be offered in various fields of rural development. These courses have to be offered to both the fresh graduates and employees working in various development departments. These courses specialising in Agriculture, Co-operation, rural banking, rural industrialisation, rural health, rural organisation, voluntary social action, public distribution system, etc., would benefit the participants of the programme very much.

These courses should be changed from time to time, particularly after a few years of experience in teaching and students should be actively involved in the preparation of course content. Seminars and group discussions may also have to be organised before actually adopting a particular course in Rural Development. All this would require a positive commitment on the part of the organisers of these courses and they require academic courage to view things from a right perspective.

Training Programmes

Training programmes should also become a part of the university teaching schedule as far as Rural Development is concerned. Since the university acquires sufficient expertise in organising various courses pertaining to Rural Development, the same talent may be further utilised for the purpose of offering foundation courses, refresher courses, advanced and specialised courses in various fields, etc. to train inservice candidates working in various Rural Development Departments. These training courses should be offered regularly and to all from time to time, so that, these in-service candidates would be better equipped with latest information and knowledge about Rural Development. These training programmes would also provide an opportunity to all its trainees to share their experiences by arranging mutual discussion. This would also facilitate the trainers to have a feed bauk of their training programme and farther facilitate them in designing the training programmes more meaningfully.

Research Programmes

The situation on the research-front in various universities also presents the same picture as it suffers from lack of integrated perspective and paucity of theorization. Though quite a good number of studies deal with various aspects of rural development, there is still much to be done. The nature of the subject also demands the undertaking of a regular and continuous research on various aspects. This would generate lot of relevant data and information to understand the rural problems and help find out proper solutions. In the light of continuous studies, Government programmes could be regularly evaluated, so that policy and administrative loopholes could be identified and solutions be sought—based on empirical data. Further, new models may be designed to create a suitable base for innovating new programmes of development.

As it is at present the Central Government has evolved a programme to involve Universities and other Research Institutes in India in the preparation of 'Block Plans'. There is also another proposal of involving universities in undertaking evaluation—studies of Integrated Rural Development Programmes. The experience in these cases, however is very encouraging. With the establishment of separate centres of Rural Development in universities would further strengthen the interaction between the government and universities on the one hand and universities and rural areas on the other.

For further improving the research programmes a Coordination Cell may be set up at the state level. The National Institute of Rural Development—A pioneering Agency in the field, may be entrusted with the activity of managing the Coordination Cell. In the light of discussions held by the Cell the Universities may formulate their own Research Policies based on their field requirements.

Thus, a combination of teaching, training and research programmes under a single organization would strengthen all activity and serve as a feed back to all other. Such a programme in Rural universities would definitely break new avenues in promoting talent output and help establishing development infrastructure at the grass-root level.

Organisational Structure and Staffing

The combined and integrated activities of teaching, training and research are to be undertaken by a single organisation may be known as Rural Development centre, but function as an integral part of the university. This centre should adopt inter-disciplinary approach in organising its activities. The centre can have different wings each specialising in a particular kind of field and activity.

The Rural Development Centre can function effectively, if one or two districts with a specified boundary are adopted by it for undertaking regular research as well as training the personnel working in various development departments of the area. A majority of the students for the courses may also have to be selected from the local area. This affords an opportunity for the University to constantly interact with the field.

Centres of this nature may require large amounts of financial outlays and many universities in the third world countries may not be in a position to spare such an amount, but a rational budgeting policy would definitely help mobilising required financial help from different sources. Local Government institutions, State Development Departments, Marketing organisations, Farmer societies can share a part of the overall expenditure, besides a liberal grant from the government.

Involving other Agencies of the University in Rural Development

The Universities are expected to provide intellectual leadership to the society and these institu-

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tions should interact with various sections of the population in different ways. The universities will have strong student unions and staff associations and these could be conveniently utilised for the purposes of undertaking various activities during the summer vacation and mid-term holidays. Besides the National Service Scheme (NSS) and N.C.C. Units, functioning in various universities may also take up the job of organising rural masses and equipping them towards a new society. These agencies may plan their activities well in advance and concentrate their efforts to raise the level of consciousness of the rural masses. These Agencies should prepare a broad outline of the objectives of Rural Development in collaboration with the Rural Development Centre. Uniformity could be maintained in organising union activities, organising the rural masses through undertaking mass-education or Adult Education activities, explaining their rights constitutional and legal position, encourage the formation of rural organisations and Agricultural Labour Associations, and initiate voluntary social action for development. Once there is a broad agreement with the basic philosophy of the programme, details could be worked out through mutual discussions and sharing of experiences. This would also strengthen the level of understanding of the students and staff and reduce the gap between them. In this process the masses also look towards the universities for guidance for finding out solutions to this problem and treat it as an important Agency of Development.

Coupled with these activities the science, engineering, technology and medicine departments may also plan to regularly spend some time in the rural areas by maintaining contact and interaction with rural masses through the dissemination of appropriate knowledge and extension of services. All these programmes will ultimately help the university involve itself in the overall development of the rural areas with definite purpose and social relevance to justify its existence.

Liaison with other administrative agencies responsible for Rural Development

Universities can undertake Rural Development Programmes more effectively if they maintain a regular rapport with other administrative agencies both governmental and non-governmental, responsible for carrying out various activities pertaining to Rural Development. Agencies such as District Rural Development Agency (DRDA), Drought Prone area programme agency, Integrated Tribal Development Agency (ITDA), Women Welfare Corporation, Panchayati Raj etc. A regular contact with them would facilitate sharing of experiences and knowledge and the Rural Development Centre located at the University level may take the initiative in this regard. Such a liaison would help strengthen the development programmes further.

The Rural Development Centre can also collect public opinion from time to time not only to evaluate its own programmes, but also see that the Rural people or their associations are involved in designing its activities. In this process, universities may develop a 'Participatory culture' among the masses to involve themselves in the Development Programmes. In this way, the Universities would also act as a training ground for building 'democratic culture' at the grass root level, while indirectly helping to build democratic institutions in the country.

Summing up

The role of Universities in Rural Development can not be over emphasised through the earlier experience with regards to universities role is not that impressive, now there is a nation-wide reconsideration to involve universities in various developmental activities. Universities located in rural areas have not only an additional advantage in organising various activities, but now it is being increasingly realised it as a social responsibility.

Universities with all its extensive resources and a substantial youth power at its command can design various activities which are socially relevant and needful to the population and the region where it functions. Through various teaching, training and research programmes, it can design relevant activities for the development of rural areas. Its organisational units along with the creation of a new institution of Rural Development Centre can effectively mobilise the rural masses in education and training and prepare them for voluntary action. All this would go a long way in establishing a close interaction with rural population which will ultimately justify the relevance and need for universities itself in the whole of society. The Government of India has put special emphasis on the rural development, and geared up the Universities to achieve the objectives proposed. We may feel happy that the function of universities has been very reassuring in this context.

Convocation

Shri Venkataraman Addresses Convocation of Berhampur University

Excerpts from the Convocation Address delivered by Shri R. Venkataraman, Union Minister for Defence at the Berhampur University on June 16, 1984.

“..Colleges and Universities were started in India by the British to provide suitable material for employment in the administration. In their own country, the Universities like Oxford and Cambridge came into existence as centres of learning and culture. While students in India entered universities to obtain a passport to employment, the intellectual youth of Europe entered their universities for enlarging their horizon, widening their knowledge and deepening their wisdom. There is frustration among our graduaates when the passport fails to land them in a job, which I have not noticed among the graduates of the Western Universities. The conditions of full or near full employment that prevail in Western countries may explain the absence of frustration among them. It is obviously impossible for the Government to guarantee employment to every graduate produced in the country and hence university education should be so framed as to enable the graduate to engage himself in gainful occupation by developing qualities of initiative, enterprise and adaptability. The contrary suggestions to cut down the number of graduates by restricting new educational institutions is a counsel of despair, fraught with serious consequences to the nation and posterity.

My professor of Economics used to say that “India is a rich country with poor people.” Resources such as water, minerals etc. have to be harnessed by human effort for production of wealth. Limestone and Bauxite would have remained filthy clay and rouble had not science and technology turned them into Cement and Aluminium. It is said that not a grain of sand lies in the beach but infinite knowledge, knows how to utilise it. Universities should inspire in the minds of its alumini, that thirst for infinite knowledge, that quest for the new and that determination to unravel the mysteries of nature. Nature does not yield its treasures easily but eludes the most discerning eyes. While our ancients worshipped elements, the moderns have harnessed them for human benefits. The use of fire for smelting iron, air for wind power, water for generation of electricity are but a few illustrations. Nature is therefore a Cathrine to be tamed by the Petruchio of Science rather than a Juliet to be worshipped by a love sick Romeo. Those who feel that age of discoveries and inventions are over must recall that many before the Renaissance should have had the same stunted mind.

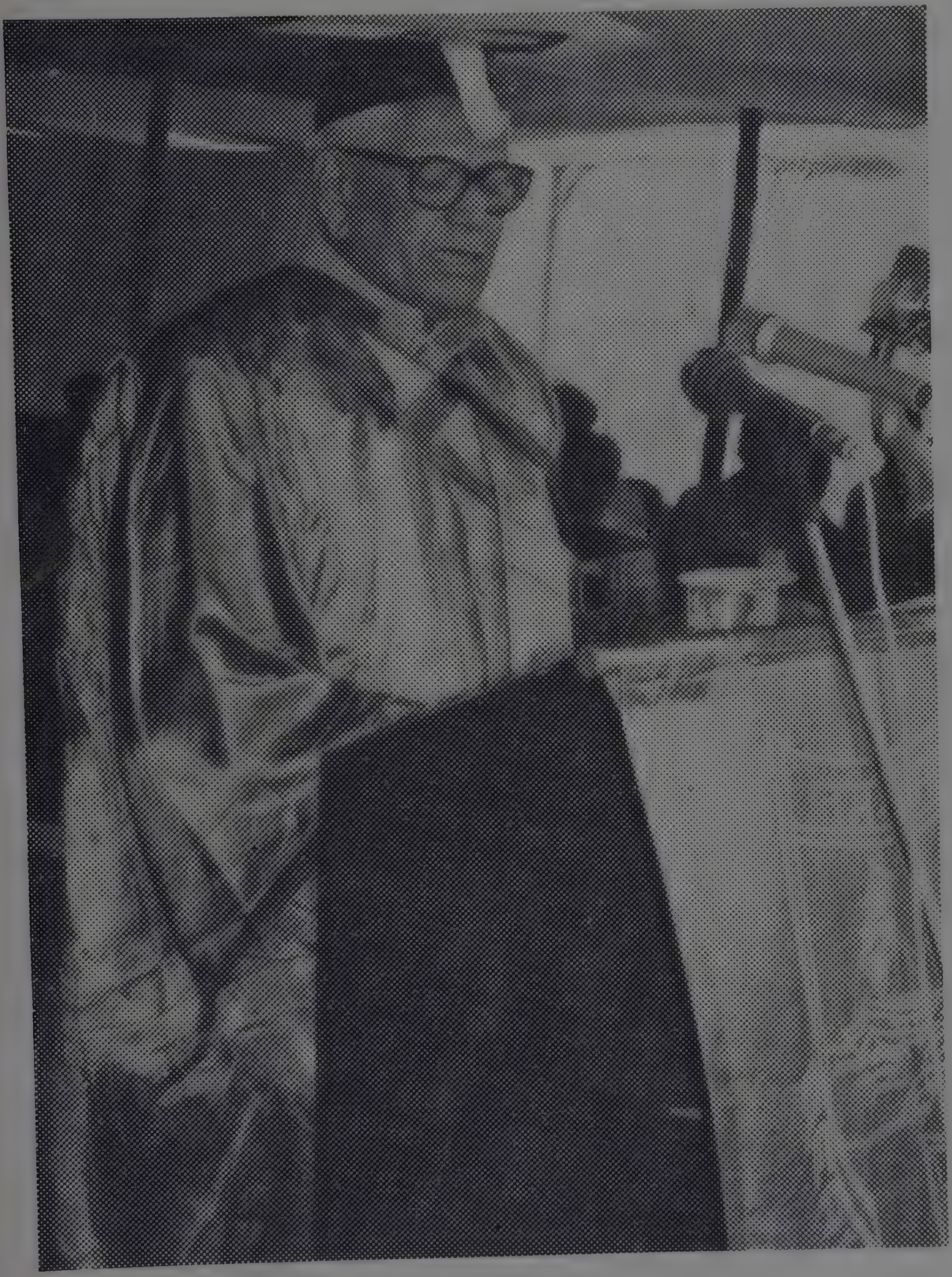
The Universities should inspire the students to set wide goals before them and not crib them into the narrow objective of securing a clerical employment. In fulfilling this objective, the teachers have a noble part to play. It used to be said that Prof. C.V. Raman inspired many young scientists of India to achieve commendable success in the field of science, long before he won the Nobel Prize and became internationally renowned.

What example can our Professors and teachers set the nation when they themselves go on strike, march with placards in the presence of students and shout indecent slogans. That spirit of dedication, of devotion and of discipline which characterised the teachers and made them vulnerable and respectable members of society should be recaptured if India is to regain its past glory.

I am not unaware of the problems of teachers, their eternal poverty, the struggle to make both ends meet in conditions of ever increasing inflation and the need to take care of these legitimate wants. My point however is that the Priest should not defile the Church whatever the provocation.

India that consists of diverse regions, talking different languages, following different religions, customs and traditions was welded together into a Nation by Mahatma Gandhi. The concept of Indian nationalism immediately took root and grew into a mighty movement for freedom and independence. This task was achieved by the educated leaders from the four corners of India who had imbibed the spirit John Stuart Mill and the democratic traditions of the British. In inculcating the spirit of nationalism democracy and freedom the Universities had rendered noble service. But today are the Universities carrying on the rich tradition of yester years or are they sowing seeds of regionalism, casteism and separatism among its alumini? Instead of broadening their vision, students are priding themselves on narrow regionalism. Such an attitude if allowed to grow unchecked will shatter the national fabric and push us back to the medieval times. India today is the biggest common market. Its people and products can move freely from Kashmir to Kanyakumari under the guarantees of our Constitution. Its size and growing economic strength have earned for the country a respected place among the comity of nations. Universities will be rendering great service if they inculcate among the alumini, a sense of patriotism and pride in their motherland.

That we are the largest democracy in the world is a truism. But what is democracy? Is holding elections at stated intervals the only test of democrcy? Will the backing of the majority in the Legislature, legitimise anti-national measures? These and several other similar questions assail the attempted definitions of Democracy. In my view Democracy is Government by public opinion, in which the administration should be in tune with the public opinion or the general will of the people. Unfortunately there is no instrument to measure the public opinion and very often sectoral opinions are pushed forward as public opinion.



Shri R. Venkataraman delivering the Convocation Address.

A violent minority by high pressure publicity or through much publicised acts of violence often creates the impression that it represents the public opinion of the country. Or a passing emotional outburst may be mistaken for the public opinion of the land. It is therefore necessary that a sober and objective opinion should be created in times of strain and stress. This can be done only by the educated, cultured and informed sections of society. Universities all over the world are engaged in the task of creating informed opinion on matters of public interest and policy and our universities should be encouraged to do so. The students passing through the portals of the University should be trained to sift the truth from the conflicting and, very often, self serving propaganda and project objective and informed public opinion so that democracy may be sustained in our country.

Indeed we are living through historic times. We have transformed a backward benighted agricultural India that it was prior to independence into a modern industrialised nation in the world. Thanks to the vision and foresight of Shri Jawaharlal Nehru, heavy industries like steel, coal, aluminium and copper were started on a massive scale through the successive Five Year Plans. Crude oil production touched 26 million tonnes in 1983-84 while installed capacity for power generation will reach 42,000 MW at the end of this Plan. The manufacture of engineering goods, fertilisers, chemicals and pharmaceuticals and consumer durables followed as a corollary to the establishment of basic industries and the development of infrastructure. Thus, industrial economy has strikingly diversified; manufacturing capabilities extend over a wide range of products and have acquired adaptability for designs, structurals and machine tools. I can state with confidence that the industrial economy has reached the take off stage.

I have somewhat laboured this point to impress on you that we have every reason to congratulate ourselves on our growth and development. It has become the fashion among seeming intellectuals to denigrate ourselves and destroy the self confidence so necessary for adventure. While I will not be euphoric on our progress, I cannot accept the ill-informed criticism that detracts the past achievements and undermines future national effort. Viewed in the proper perspective, our achievements should spur us towards higher goals and not lull us into complacency.

National progress will be meaningful only to the extent that it improves the standard of living of the weaker sections of the society. If scientific and technological developments are not translated into schemes for the relief of the vulnerable sections of society, these very developments will soon get discredited. A deprived people will turn into a desperate people and the peaceful evolution of society will then become a casualty. Thus, confining the fruits of development to certain regions or certain classes constitutes a threat to society. We have managed to inject scientific agricultural methods in a rigidly traditional area and to introduce mechanised small scale units in the place of traditional cottage industries. We have made massive investments through successive Five Year Plans but all these have not mitigated the gigantic problem of unemployment and under-employment. Nor have they made noticeable impact on the volume of persons below the poverty line. One of the reasons for this sorry state of affairs is the unbridled growth of population. From about 320 million people three decades ago, the population of India has increased to around 700 million today. Besides, the rate of growth of population among the vulnerable sections of society is disproportionately larger than in the middle and affluent classes, thereby accentuating the increase of people below the poverty line. There is an urgent need, therefore, among the educated people not only to practice population control but create a climate for its acceptance among those amidst whom they live.

Let me take the goals of Growth with Social Justice. This University happens to be located in what is termed as an educationally backward area. It is said that due to historical and socio economic reasons, education in the districts of Koraput, Phulbani and the agency tracts of Ganjam has not kept pace with the rate of educational development in other regions of Orissa, leave alone other advanced areas in this country. I also find that out of the 58 lakhs population served by your university 18 lakhs belong to Scheduled Tribes and another 4 lakhs to Scheduled Castes. This provides a unique opportunity and a challenge to the university. Through National Science Schemes, through Adult Education Programmes, through Extension Projects the University and its colleges should get deeply involved in the development, in particular the educational development of the region. All the knowledge and skills you possess in the various disciplines and the energy and enthusiasm of students should be brought to bear upon the developmental issues. There is no education better than that arising from a direct involvement in the eradication of our rural poverty. I am sure the students will welcome such programmes and the faculty will get enriched by the encounter of modern knowledge with traditional wisdom and our century old problems.

Experts have made several suggestions on educational reforms. I wish however to confine myself to two matters. The U.G.C. Scheme of autonomous college is a step in the right direction and I venture to suggest that you experiment with atleast a few such institutions. The next one relates to curricula in the Universities which compels our students to take a defined combination of subjects. Under our dispensation, a genius in one specialisation may not even qualify for a degree in our Universities because he cannot make the grade in other compulsory subjects. There is too much rigidity in the curricula that one is denied opportunity to study a combination of subjects of one's choice. There is no reason why a student should not be allowed to study a combination of subjects such as Literature, Psychology, Electronics and Computer Technology. Such options are available to students in many Western Universities and I know the students are better off for it. I understand that a few institutions in India have adopted this concept and I hope this becomes more and more widespread.

Friends, the tasks ahead are immense and complex. We are involved in a gigantic transformation of a Sixth of mankind and we are attempting this process of transformation in our own unique way, preserving the best of traditions. Independence and national unity are continuing struggles and every citizen is a soldier in this struggle. Whatever your chosen path in life, I am sure you, the graduates of the year, will maintain the spirit of crusade for a better life to our people and our country. May I conclude by offering my congratulations once again to all those who have been awarded their degrees this year and wish them success in life. □

New Colleges in Saurashtra University

On the request of the State Government, Health Department and the Director of Drug Control Administration for affiliation of a new degree college for teaching courses leading to the degree of Bachelor of Pharmacy, the Academic Council and the Syndicate of Saurashtra University have recommended affiliation of a new Pharmacy College to the State Government. The new Pharmacy College will commence functioning in Rajkot.

The Academic Council and the Syndicate have also recommended to the State Government affiliation of a new Arts and Commerce College at Kodinar. The college will start functioning from this academic year. Kodinar is situated in Junagadh district.

The Arts & Commerce College at Limbdi requested the University for granting them affiliation for starting First Year B.Sc. Home Science courses under the Faculty of Home Science. The Academic Council and the Syndicate of this University have recommended to the State Government the affiliation of this college. The First Year B.Sc. Home Science classes will start functioning from this academic year.

The first batch of B.Sc. Home Science degree under the Faculty of Home Science will be passing the Bachelor degree examination this year. There are no facilities for M.Sc. Home Science courses in the University area. The University had therefore requested the U.G.C. to give assistance to the University for starting M.Sc. Home Science Courses and have also requested that this grant may be considered as out of the Sixth Plan. The U.G.C. appointed a committee which visited the University and had discussions with the Vice-Chancellor, the Registrar, the Academic Officer, the Dean of the Faculty of Home Science and teachers in Home Science. The committee is likely to submit its report very early and if the Commission sanctions the grant for this purpose, the University will start M.Sc. Home Science courses this year.

The University has framed courses of studies leading to the degree of Bachelor of Business Administration. This is a three-year degree course after Higher Secondary examination of 12 years schooling. Three colleges in the University area viz., one at Rajkot, other at Junagadh and the 3rd at Jamnagar are teaching these courses.

The university has recently framed a new Ordinance in connection with the restriction for affiliated colleges to change their location or to give the college building or a part of it on rental basis without prior permission of the University. According to the provision of this Ordinance the college will have to send an application with a fee of Rs. 500 to the University not later than the 31st December of the year preceding the year from which such change is intended to take effect. It shall also setforth elaborately the reasons for the change. A college will also have to submit the plan of the college building together with an elaborate note detailing the physical facilities available in the building as per University norms in respect of dimensions of the classrooms including rooms for tutorials, teachers' rooms, Library, including the reading room, Laboratories, boys common rooms, girls common rooms, Principal's room, etc. The Syndicate after enquiring may grant the permission asked for by the college on such conditions as it may deem necessary or the Syndicate may refuse the permission asked for.

III Marathi sociological conference at Shivaji University

The Department of Sociology of the Shivaji University hosted the Third Marathi Sociological Conference from 28th to 30th June, 1984 at Kolhapur. Nearly 125 delegates as well as experts in Sociology from different parts of Maharashtra and Marathi speaking scholars from outside Maharashtra participated in the conference.

As many as 26 papers covering various aspects of Sociology were presented in five sessions of the conference. The Conference had sessions on "Dr. G.S. Ghurye and Indian Sociology," "Sociological Research in Maharashtra", "Impact of Industrialization on Rural Society in Maharashtra," Social Movements in Modern Maharashtra," and "Problems of Dalits and Oppressed classes in Maharashtra." There was full attendance of the delegates in all the sessions of the conference.

The conference was inaugurated by Prof. K. Bhogishayan, the Vice-Chancellor of the Shivaji University. The presidential address was delivered by Dr. D.N. Dhanagare, Professor and Head, Deptt. of Sociology, University of Poona on "Sociological Research in Maharashtra: Problems and Prospects."

At the inaugural function, Dr. Vilas Sangave was felicitated for his contribution to Sociology and a demand draft of Rs. 5,500 was handed over to the Vice-Chancellor by Vice-President of the Dr. Vilas Sangave Felicitation Committee to institute "Dr. Vilas Sangave Sociology Prize" for the student standing first in Sociology at B.A (Special) Examination in the University.

The valedictory address was delivered by Prof. D.U. Pawar, Dean, Faculty of Social Sciences, Shivaji University. On this occasion Dr. Wilkinson, Ex-Principal, Hislop College, Nagpur was felicitated for his contribution to sociology and for the best teacher award declared by the Govt. of Maharashtra.

The two earlier conferences were held at the Marathwada University, Aurangabad and Hislop College, Nagpur. The fourth Conference is scheduled to be held at the University of Poona some time in the month of June 1985.

Winter Institute at SNDT

The Research Unit on Women's Studies of S.N.D.T.

Women's University, Bombay held the First U.G.C. Winter Institute on 'Women's Studies in the Social Sciences' primarily for the University teachers in Social Sciences of the Universities of Maharashtra and Gujarat States for three weeks. Representatives from Universities from other states and local organisations also participated.

The objectives of the programme were: (i) to orient the teachers in new perspectives in women's studies; (ii) to acquaint them with the kind of material available and the scope and direction of research work done in women's studies; (iii) to enable them to design alternate models of curriculum and courses in social sciences in women's studies.

The workshop was inaugurated by Dr. (Smt.) J.H. Trivedi, Vice-Chancellor of the University. The workshop attempted to give the participants sufficient exposure to the kind of problems and issues that have surfaced in the last few years due to feminist scholarship and research carried out by various agencies, national and international, and to new ideas and new thinking on the problems. In addition to lectures-cum-discussions, panel discussions, use of film and street drama using folk-music and folk-drama to highlight social problems, were made.

The exposure provided by the workshop, it is hoped, would open up areas of investigation and controversy of which the participants were not aware of before.

Three bound volumes of background papers were brought out as Resource Materials i.e.:

Vol. 1 on various theoretical issues concerning women and women's studies.

Vol. 2 dealt with analysis of concepts and critique of various disciplines.

Vol. 3 dealt with compilation of reports and recommendations of earlier conferences held in India, details of course in women's studies taught or proposed, some fact sheets on critical indicators such as employment, health, education and law, extensive bibliographies and resource guides on material.

A book exhibition was also arranged.

Workshop on environmental awareness at BCKV

A Workshop on Environmental Awareness under integrated Eco-Development Project of the Ganga Basin was held at the Communication Centre of the Bidhan Chandra Krishi Viswavidyalaya from 28-30 June 1984. The Workshop was sponsored by the Department of Environment, Govt of India and the Viswavidyalaya.

The Workshop was inaugurated by Sri Bhabani Mukherjee, Minister-in-charge, Department of Environment, Govt. of West Bengal and presided over by Sri J.C. Sengupta, Vice-Chancellor, Bidhan Chandra Krishi Viswavidyalaya.

Prof. S. Mukhopadhyay, Coordinator of the Project in his introductory address said that West Bengal is situated at the tail end of the River Ganga and is severely affected due to release of untreated effluents from the industries and municipalities on both sides of river, pesticides from agricultural lands etc. Being the life line of millions of people of the State, it is necessary to control its pollution.

The Workshop included topics like health hazards in crops, animals and human beings, water pollution around acquatic life, social forestry and role of plants in pollution control, conservation of water resources from pollution, transfer of knowledge for environmental awareness etc.

Fortyone delegates from Municipalities, Science Clubs and student volunteers of the Agricultural University participated in the Workshop,

Inter-Varsity NSS camp at Osmania University

Mr. Syed Hashim Ali, Vice-Chancellor of Osmania University, advised students to take up constructive work and studies with sincerity and dedication to build a better India. He said the students can make or mar their careers and the country. He cited the examples of small South-East countries which have high standard of living and ethics. Mr. Hashim Ali recently inaugurated the first batch of Inter-Varsity NSS camp organised by Osmania University. The ten-day camp was attended by more than 300 NSS boys including those from Andhra and Srikrishna Devaraya Universities, who would take up landscaping and afforestation on the campus.

The Vice-Chancellor said if youth of the country take up development programmes no one could stop the country from becoming one of the top countries in the world. He said the youth had to establish themselves and should not be misled by bad models that were present. He said NSS would promote leadership qualities and mould them into better citizens.

Mr. A.M. Govardhan, NSS Programme Coordinator, said three camps would be organised, each ten-day long, involving about 1,000 NSS volunteers from all over the State. In the Youth for Ecological Development Programme, 6000 pits would be dug and sapplings would be planted this month. He said the students would have literary and sports activities during the camp.

Training course at CSRE

The Centre of Studies in Resources Engineering established at the initiative of the Department of Science & Technology at the Indian Institute of Technology at Bombay will be conducting a 16-week Training Course from 27 August 1984. This 10th course to be offered at CSRE will be on Remote Sensing and its application to various themes such as Water resources, Mineral resources, Terrain evaluation and Land use Planning.

The centre has designed the course to train middle level in-service Engineers and Scientists in the area of fundamentals of Satellite Remote Sensing.

Emphasis will be placed on attaining a certain amount of competence in the application of Remote Sensing Technology through tutorials, laboratory work and field visits. A project report on selected topics will also have to be submitted by the participants.

Candidates possessing degree in Engineering or equivalent qualifications or degree in Science with Physics or Mathematics or Chemistry or Geology or Forestry or Agricultural or Soil Science will be eligible.

The maximum number of participants will be 10 in each of the areas of Water resources, Mineral exploration and Terrain evaluation and Landuse planning.

Further information can be had from Dr. T.V. Pavate, Chief Project Engineer, Remote Sensing Division VI, Training, Extension and Project Cell, Centre of Studies in Resources Engineering, Indian Institute of Technology, Powai, Bombay.

Indo-US seminar

The Department of Special Education of PVDT College of Education for Women organised an Indo-US Seminar on 'Education for Young Disabled' under the programme of Indo-US Sub-Commission of Education and Culture and U.G.C.

The areas identified for the seminar and papers presented by participants from India and U.S.A., were on educational awareness, special education, integration and mainstreaming, multidisciplinary approach, special education, teachers and training, and contribution of the Central and State Governments and voluntary agencies towards meeting the needs of young disabled. The priority areas were identified for action.

Plan to establish medical institute in Calcutta

The Government is considering a proposal to establish an autonomous institute of post-graduate medicine in Calcutta by upgrading the University College of Medicine, Calcutta. The proposed institute will be established on the lines of the All India Institute of Medical Sciences, Delhi and PGI, Chandigarh and will be named after Dr. B.C. Roy who founded the University College of Medicine in 1957.

The institute will be under the administrative control of the Health Ministry and the academic control of the Calcutta University.

The Medical Council of India has already cleared the proposal. It has also recommended merging of SSKM Hospital at present being run by the State Government.

Bihar to set up Technical University

The State Government of Bihar is considering a proposal to set-up a Technical University to govern the recognised engineering Colleges in the State. This was stated by the Science and Technology Minister of the State in Patna recently.

UGC special assistance to SNDT

During the sixth plan period, the U.G.C. has sanctioned a special assistance of Rs. 15 lakhs to the University Department of Gujarati of S.N.D.T. Women's University, Bombay for research projects and departmental developments.

Calendar of Events

Proposed Dates of the Event	Title of the Conference/Seminar/Symposium/Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be Contacted
August 1-21, 1984	Summer Institute on Indian Fisheries	To acquaint the staff members of Post-graduate courses with specialisation in Fisheries.	Department of Industrial Fisheries, University of Cochin, Cochin.	Dr. C.T. Samuel, Prof. & Head
August 22-24, 1984	Symposium on Theory of Sample Surveys and its Applications	To bring together research workers and to discuss current and future trends of research in this area.	Department of Statistics, Sardar Patel University, Vallabh Vidyanagar.	Dr. S.M. Shah, Director
September 12 to October 12, 1984	Summer Institute for Physics Teachers involved in Teaching	To familiarise the Physics & Electronics teachers with the recent developments in Electronics, new types of equipments and better methods of teaching.	Dept. of Electronics, University of Cochin, Cochin	Dr. K.G. Nair, Prof. & Head
September 24-29 1984	Seminar on Hindi Alochana Sahitya	To bring together the leading critics of Hindi and South Indian Languages so that the teaching as well as student community can understand the similarities and contrast present in the way of approach.	Dept. of Hindi, University of Cochin, Cochin	Dr. N. Raman Nair, Prof. & Head

News from UGC

UGC invites nominations for fellowships and visitorships in U.S.A.

The University Grants Commission has asked the Universities to nominate senior teachers in Universities and their affiliated colleges for some fellowships and visitorships for post-doctoral research work at the universities and other institutions in the United States.

Teachers with a minimum of 10 years' teaching experience and published research work are eligible for these fellowships and visitorships. The fellowship will be for a period of one academic year (6-10 months), while the visitorship will be for a short period (2-3 months). The UGC will provide international air-fare from India to U.S.A. and back. In addition, the U.S. authorities will also provide allowance for maintenance, books and study-related travel in that country.

The fellowships/visitorships are for fundamental studies in frontier areas in Physics, Chemistry, Mathematics, Life Sciences and Bio-Technology, Laser Technology, Marine Resources Development, Computer Science and Technology, Semi-Conductor Technology, Micro-Processors applications and Micro-Electronics, Communication Technology, Educational Technology, Renewable Energy Studies, Environmental Sciences and Technology, Package Engineering and Technology and Social and Economic History, (including Historiography), Science, Technology and Society, Comparative Literature, Literature and Society, Performing Arts, International Economic Co-operation, Money and Finance, Economics of Energy, Urban Development and Planning, Policy Sciences and Comparative Ethnography.

In addition, the Commission has also invited nominations of teachers for undertaking research, for a period not exceeding four weeks, in science subjects and Engineering and Technology under the Indo-US Exchange of Scientists' Programme. Under this programme, only such teachers will be considered who have already established contacts with Scholars / Institutes / Laboratories in U.S.A. and the teachers selected will be entitled for travel expenses by the Commission and suitable maintenance allowance by the U.S. authorities.

Interested teachers may contact their own Universities and arrange to send their bio-data and work plan through the University. The universities are being asked to forward the nominations to the University Grants Commission **latest** by September 30, 1984.

U.G.C. invites nominations for FRG fellowships

The University Grants Commission has asked the Universities to nominate scholars for 12 fellowships for advanced studies and research at Universities and Research Institutions in Federal Republic of Germany and in West Berlin for the year 1985-86.

These fellowships are in the fields of Natural Sciences (Physics, Chemistry, Zoology and Botany), Mathematics, Geology, German Language and Literature, Economics of Energy and Management of Education.

While the two fellowships earmarked for German Language and Literature are meant for teachers/students of this Language who are registered for Ph.D. with an Indian University and wish to go to F.R.G. for collection of advance material in the subject, the fellowships in other fields are meant for staff members of the universities and its affiliated colleges.

The Universities have been asked to forward the nominations to the University Grants Commission latest by September 20, 1984.

The Commission would pay second class rail fare to the candidates called for interview.

News from Abroad

Scientific R & D expenditure in Japan

Between April 1982 and March 1983 Japan spent 6.5 trillion yen on scientific research, ranking second only after USA among the market economy countries, reports Japan Review in its issue of May 1984. This expenditure was 2.44 per cent of Japan's GNP.

The survey conducted by the Office of the Prime Minister of Japan further revealed that spending by private sector was dominant, accounting for three-quarters of Japan's total outlay for Scientific R&D. A notable increase in spending for research related to recombinant DNA and other areas of life sciences was also found.

Scientific research spending in both public and private sectors totalled yen 6,528.7 billion in 1982-83, a nominal increase of 9.1 per cent over the previous years' expenditure. After adjustment for inflation, the real increase amounted to 5.4 per cent. Of the total amount, the private sectors accounted for yen 4,855 billion.

In terms of amount spent on scientific research as a proportion of GNP, Japan ranked third (2.44 per cent). The Federal Republic of Germany spent 2.66 per cent of GNP and USA, 2.53 per cent of GNP during 1982.

The bulk of Japan's expenditure for R & D was in natural sciences. (yen 5,881.5 million) which represented 90.1 per cent of the total expenditure.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies; Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Krishan Kumar. *Mechanics of solids.* MDU, Rohtak. Dr. P.S. Deswal.

Physics

1. Anil Kumar. *Classical and quantum non-linear systems.* U Delhi. Dr. V.S. Verma.

2. Dixit, Dwarika Prasad. *New non-destructive interferometric techniques for determining the refractive index of a lens.* Devi Ahilya, Indore. Dr. R.S. Kasana.

3. Manoj Kumar. *Study of gauge theory interactions in elementary particles.* U Delhi. Dr. D. Bandyopadhyay.

4. Pandharkar, Sadhana. *X-ray absorption and diffraction studies of some metal chelates.* Devi Ahilya, Indore. Dr. R.G. Anikhindi.

5. Ranbir Singh. *Electron para-magnetic resonance studies of doped single crystals.* MDU, Rohtak. Dr. V.P. Seth.

6. Sangale, Shivajirao Mahadeo. *Optical properties of rare earth activated II-IV compounds.* Shivaji U, Kolhapur. Dr. C.S. Bhalgaonkar.

7. Sharma, Ashok Kumar. *Design and development of cathode for high power microwave tubes: Studies on polysilicon Solar cells.* BHU, Varanasi. Dr. C.M. Pathak and Prof. S.K. Srivastava.

Chemistry

1. Bassi, Kamal Dev. *Designing polymers for synthesis and semi-synthesis of peptides.* HPU, Shimla. Dr. C.S. Pandey.

2. Chauhan, Mohinder Singh. *Preferential solvation of ions in acetonitrile and methanol mixtures.* HPU, Shimla. Dr. D.S. Gill.

3. Chauhan, Saroj Kumari. *Determination and analytical applications of dithiocarbonates.* HPU, Shimla. Dr. B.C. Verma.

4. Deo, Medha Girish. *Studies in biologically active compounds using chromatography techniques.* Shivaji U, Kolhapur. Dr. B.B. Ghatage.

5. Jitendra. *Studies on the chlorophenoxy derivatives of titanium (IV).* HPU, Shimla. Dr. C.S. Chaudhry.

6. Mehta, Suresh. *Studies on Orthochlorophenol and its niobium (IV) derivatives.* HPU, Shimla. Dr. C.S. Chaudhry.

7. Sood, Anita. *Determination of trithiocarbonates and investigations on their analytical uses.* HPU, Shimla. Dr. B.C. Verma.

Engineering & Technology

1. Joshi, Hari Narayan. *Investigation in the mechanics of ball burnishing process.* Devi Ahilya, Indore. Dr. A.K. Chitale.

2. Narathe, R.R. *An investigation into the generation of streaming potential: Its measurement in a flow through granular media with special reference to filtration and ground water flow.* Shivaji U, Kolhapur. Dr. A.V. Rusbud.

BIOLOGICAL SCIENCES

Zoology

1. Jyoutsna. *Genetic control of enzyme expression in* **Drosophila** *species hybrids.* MDU, Rohtak. Dr. Ravi Parkash.

Medical Sciences

1. Mishra, Bramheshwar. *Biopharmaceutical studies of some prolonged action dosage form.* BHU. Varanasi. Dr. J.K. Pandit.

2. Mishra, Dina Nath. *Preparation and evaluation of products of some of insoluble drugs.* BHU, Varanasi. Dr. J. K. Pandit.

3. Singh Gyanendra Nath. *Stability and kinetic studies of some drugs.* BHU, Varanasi. Dr. R.P. Gupta and Dr. R.H. Singh.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Adiga, Chandrashekar. *A study of some identities stated by Srinivasa Ramanujan in his 'Lost' notebook and earlier works.* U Mysore.

2. Audinarayana Moorthy, S. *Contributions to the theory of arithmetic functions.* Utkal U, Bhubaneswar.

3. Khanna, Surinder Kumar. *Some queueing systems with additional server/space.* Kurukshetra U.

4. Misra, Jagadischandra. *Mathematical modelling in the realm of biomechanics and structural mechanics.* U Calcutta.

5. Mishra, Narendra. *Approximation of continuous functions by interpolatory polynomials.* U Lucknow.

6. Mukhopadhyay, Manabendranath. *Some problems connected with the study of bitopological space and mixed topology.* U Calcutta.

7. Rajappa, B. *Stability of flow between two cylinders bounded by porous material.* U Mysore.

8. Singh, Ram Lal. *A study of some classes of Hilbert space operators.* Kurukshetra U.

9. Veluchamy, T. *Composition operators on LP spaces.* U Jammu.

Physics

1. Amar Singh. *Dielectric relaxation study of ternary mixtures having associative and non-associative components.* U Lucknow.

2. Bandyopadhyay, Ramrenu. *X-ray determination of the molecular and crystal structures of some compounds containing light atoms and by theoretical calculation using quantum-chemical method.* U Calcutta.

3. Bhat, Yajnaralkya. Subray. *Studies in catalysis: Some aspects of surface energetics and kinetic analysis of an important reaction—Catalytic conversion of diethylenetriamine to higher amines and piperazine.* U Poona.

4. Bhattacharyya, Pratap. *Investigations on nuclear spectroscopy through reactions induced by neutrons.* U Calcutta.

5. Chakrabarti, Purushottam. *Studies on secondary ion emission from ion-bombarded solid surfaces by a quadrupule mass spectrometer.* U Calcutta.

6. Chatar Singh. *Design fabrication and studies on opto-electronic particle monitors.* Kurukshetra U.

7. Das. L.K. *Theory of knight shift of metals.* Berhampur U.

8. Gupta, C.L. *Thermodynamic properties of some ionic crystals.* U Lucknow.

9. Harbhajan Singh. *Photoconducting and time resolved spectra of some single and mixed crystals using pulsed N_2 laser and dye lasers.* Kurukshetra U.

10. Kalia, Sneh Lata. *Study of the spectrum produced by a strongly driven atom with the help of certain characteristic operators.* U Lucknow.

11. Krishnaswamy, S. *Studies on the surface properties of liquid crystals.* U Mysore.

12. Lokhande, Chandrakant Dnyandev. *Studies on electrochemical photovoltaic cells formed with Al doped CdS films.* Shivaji U, Kolhapur.

13. Pandit, Pashupati Nath. *A study of some hadronic properties in the harmonic oscillator quark model with QCD affected wave functions and relativistic effects.* Pb U, Chandigarh.

14. Patel, Ashokkumar Dahyabhai. *Studies on compound semiconductor ($AgInSe_2$) thin films.* SPU, Vallabh Vidyanagar.

15. Ram Parkash. *Capture-at-rest of π, μ and K in complex nuclei.* Kurukshetra U.

16. Sengupta, Nandini. *Some tropospheric effects on microwave communication.* U Calcutta.

17. Thakur, Sher Singh. *Some aspects of thermodynamic and transport behaviour in multicomponent systems.* HPU, Shimla.

18. Tiwari, Shailendra. *The cohesion and phase transition studies on non-metallic solids.* RDV, Jabalpur.

19. Virdi, Gurdeep Singh. *Design and development of low energy ion-implantation machine and some studies of ion implanted samples.* Kurukshetra U.

Chemistry

1. Adak, Asok Kumar. *Studies in the transition metal complexes of pyrazole derived ligands.* U Calcutta.

2. Bhaumik, Smritirekha. *Synthetic and biological studies on the analogues of nucleic acid bases.* U Calcutta.

3. Bose, Anil Kumar. *Air quality study in Jharia coalfield.* ISM, Dhanbad.

4. Chauhan, Rameshwar Singh. *A study of solute-solvent and ion-solvent interactions of some electrolytes and non-electrolytes in different solvents.* U Lucknow.

5. Chittore, Joshua. *Syntheses of certain new 1, 3, 5-triazine thiones.* U Ker, Trivandrum.

6. Dhingra, Usha. *Analytical chemistry of molybdenum and some related elements.* Kurukshetra U.

7. Idge, Bhaskar B. *Studies in hydroxyl terminated polybutadines.* U Poona.

8. Jain, Rajesh Kumar. *Physics and chemistry of cellulose and cellulose derivatives.* Kurukshetra U.

9. Kapoor, Parminder. *Studies on the thermal and chemical properties of cellulosics.* Kurukshetra Ul

10. Lamture, Jagannath B. *Studies in phytochemistry: Sesquiterpenes of* **Pinus longifolia.** U. Poona.

11. Mamuni, R. Manavala. *Studies on resins and their polychelates derived from hydroxybenzoic acids.* SPU, Vallabh Vidyanagar.

12. Mandal, Suchitra Kumar. *Solute-solvent interactions from transport studies.* U Calcutta.

13. Misra, Nira. *Studies on the synthesis and characterization of polymers with functional end groups.* U Calcutta.

14. Mishra, Ramesh Kumar. *Studies on sorption properties of hydrous oxides of aluminium (III) and tin (IV).* RSU, Raipur.

15. Mohanty, Gopal Krishna. *Mechanistic studies of some electron transfer reactions.* Berhampur U.

16. Narayana, Kosuru Lakshmi. *TLC and aggregation studies of some azine dyes.* Andhra U, Waltair.

17. Pande, Madhav Vishnupant. *Studies on lanthanide complexes.* Nagpur U.

18. Pandey, Yadu Nath. *Studies on isothiocyanatochromates of some Ce(IV), Th(IV) and UO_2 (II) complexes and applications of isothiocyanatochromates in the analysis of organic bases.* U Lucknow.

19. Patel, Jagdishbhai Lallubhai. *Some aspects of polymer chemistry: Friedel-Crafts polymers from PXDC.* SPU, Vallabh Vidyanagar.

20. Patel, Jivanbhai Laljibhai. *Physicochemical properties of polymers : Synthesis, solution, mechanical and thermal properties of poly (2-methoxy) cyanurate of bisphenol-C and bisphenol-F.* SPU, Vallabh Vidyanagar.

21. Patel, Pravinbhai Bahecharbhai. *Studies in physical organic chemistry : Kinetics of nucleophilic substitution reactions of p-nitrobenzyl bromide.* SPU, Vallabh Vidyanagar.

22. Pramanik, Jaydeb. *Applications of substitute thiocarbohydrazides in the analysis of platinum metals.* U Calcutta.

23. Purohit, Kishore Mohan. *Physico-chemical studies of some metal complexes: Copper and Chromium.* Sambalpur U.

24. Reddy, Nagavelli Laxma. *Studies directed towards the total synthesis of anthracyclinones.* U Poona.

25. Renu Bala. *Electrochemical investigations of certain metal complexes in aqueous and non-aqueous media.* Pb U, Chandigarh.

26. Sankara Reddy, P.B. *Studies in extraction photometry and polarography.* SKU, Anantapur.

27. Sardar, Mukhtar A. *Chemical reactions of metal-8-quinolinolates.* U Poona.

28. Sat Pal. *Physico-chemical studies on high polymers.* Kurukshetra U.

29. Saxena, Rashmi. *Studies on isothiocyanatochromates of some copper (II) complexes and use of isothiocyanato-cyanatochromates in the analysis of some drugs.* U Lucknow.

30. Sekhri, Madhu Bala. *Influence of dielectric constant of medium on ion-association and ionic mobility.* HPU, Shimla.

31. Sharma, Parshotam Dass. *Photochemistry of some carbonyl compounds.* Kurukshetra U.

32. Sharma, Rattan Lal. *Synthesis of vasicine and related compounds and chemistry of* **Piper peepuloides.** U Jammu.

33. Srivastava, Neeru. *Synthesis of some possible antimicrobial agents.* U Lucknow.

34. Srivastava, Vinod Kumar. *Studies on synthesis and reactions of some organotellurium (IV) derivatives.* U Lucknow.

35. Sukhbir Singh. *Topological features of molecules and their correlations with physicochemical properties.* Pb U, Chandigarh.

36. Tiwari, Rajeev Lochan. *Kinetics of the oxidation of organic compounds with Co(III) in acid medium.* RDV, Jabalpur.

37 Venugopalan, C.R. *Kinetic studies on alkaline hydrolysis of some acid phthalic and acid terephthalic esters* Calicut U.

38. Wagh, Sanjay B. *Nucleophilic reactions of cyclic anhydrides: A synthetic approach to organic heterocycles.* U Poona.

Earth Sciences

1 Madhusudana Rao, Chigurapati. *Geochemistry of the sediments of the central-western continental shelf of India.* Andhra U, Waltair

2 Nayak, Kamal Kishor. *Stratigraphy, palaeontology and sedimentology of the Nimar sandstone bagh beds of Jhabua District, Madhya Pradesh* U Poona

3 Veerangouda, Neeramanvi Rajashekhar. *Spodumene pegmatites and associated rocks of Amareshwar area, Raichur District, Karnatak.* Kar U, Dharwad.

Engineering & Technology

1 Ajit, G.M. *Advanced microcomputer based numerical control system.* U Cochin.

2 Appa Rao, Allam *Studies on computer performance evaluation* Andhra U, Waltair.

3. Ghosh, Sanjoy Kumar. *A study of air pollution including toxic trace elements in an Indian coalfield and its likely impact on incidence of diseases.* ISM, Dhanbad.

4. Mitra, Pijush Kanti. *Studies on characteristics of coal carbonization.* ISM, Dhanbad.

5. Ramachandra Iyer, P.V. *Studies in pneumatic conveying in horizontal pipes.* IIT, Delhi.

6. Viswanadham, V. *Axial dispersion of pollutants through porous media.* IIT, Delhi.

UNIVERSITY NEWS

University News is published weekly by the Association of Indian Universities to promote awareness of contemporary thinking on higher education. Views expressed in the journal are those of the authors and do not reflect the policies of the Association.

Articles are invited by the Editor on matters relating to University education. Manuscripts (in duplicate) should be sent to Editor, University News, Association of Indian Universities, AIU House, 16 Kotla Marg, New Delhi-110002. They should be typed on one side of the paper, double spaced with wide margins. Each article should be accompanied by a summary/abstract of 100/150 words on a separate sheet.

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(Advertisement No. 3/1984-85)

Applications are invited for the undermentioned posts. The benefit of Provident Fund/Pension, Dearness Allowance, House Rent Allowance and City Compensatory Allowance are admissible according to University rules. The retirement age of University Employees is 60 years. The appointment will be made on one year probation on all permanent posts. Higher starting salary within the grade is admissible to specially qualified and experienced candidates.

Applications will be entertained on the prescribed form duly supported with a Bank Draft or Crossed Indian Postal Orders of Rs. 7.50 (of Rs. 2.00 for the candidates belonging to Scheduled Caste/Scheduled Tribes category) in favour of the Registrar, Banaras Hindu University towards the application fee. Application forms and detailed qualifications will be supplied free of cost by the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221 005 on receipt of Re. 0.90 paise stamped self-addressed envelope of 23 cm x 10 cm size. Candidates called for interview for these posts will be paid actual Railway fare by the Second Class plus reservation charges for sleeper, if paid, and/or actual Bus fare from the present residence bothways by the shortest route as per University rules. No other expenses will be paid.

Applications for each post be sent separately alongwith attested copies of certificates and marksheets in support of the qualifications and experience mentioned in the appilcation and be addressed to the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221 005.

Incomplete application in any respect will not be entertained for consideration.

Those who are in service should apply through proper channel. M.O. or Cheque will not be accepted towards application fee.

Reservation: (1) A reservation of 15% in the case of Scheduled Castes and 7½% in the case of Scheduled Tribes will be made in the category of teaching posts upto the level of Lecturers only. (2) A reservation of 22½% (15% S.C. and 7½% S.T.)will be made in the category of non-teaching posts at the entry level.

The last date for receipt of application in the Office of the Registrar (Selection Committee Section), Banaras Hindu University either by post or by hand will be **August 14, 1984.** No application shall be entertained after the last date from external, in-service employees and the candidates residing abroad.

Note: 1. Number of vacancies are tentative and can vary according to needs.

2. Panel may be drawn for temporary appointment of Lecturers against future vacancies.

Grade

Professor: Rs. 1500-60-1800-100-2000-125/2-2500 N.P.A. admissible to medical graduates for the posts in the Institute of Medical Sciences only.

Reader: Rs. 1200-50-1300-60-1900. N.P.A. admissible to medical graduates for the posts in the Institute of Medical Scienees only.

Lecturer : Rs. 700-40-1100-50-1600. N.P.A. admissible to medical graduates for the posts in the Insti-tute of Medical Sciences only.

Other posts: As indicated against the respective posts.

INSTITUTE OF MEDICAL SCIENCES

1. **Professor of Medicine** (Nephrology) (One).
2. **Professor of Psychiatry** (One).
3. **Reader in Biophysics** (One).
4. **Reader in Surgery** (Neuro-surgery) (One).

5. **Reader in Neonatology & Perinatology** (One) (Dept. of Paediatrics)

6. **Project Co-ordinator** (temporary for three years) (One) (UNICEF-NFI-UGC Project on Learning Disabilities and Malnutrition in Rural School Children—Dept. of Paediatrics).
Grade: Rs. 1100-50-1600.

7. **Lecturer in Medicine** (Neurology) (One).

8. **Lecturer in Paediatrics** (Two) (including one post under Post Partum Programme)

9. **Lecturer in Psychiatry** (One).
10. **Lecturer in Microbiology** (One)
11. **Lecturer in Anaesthesiology** (One).
12. **Acoustic Engineer** (One) (Dept. of E.N.T.)

Grade: Rs. 1100-50-1600.

13. **Professor/Reader in Biophysical Chemistry/Cellular and Molecular Biology/Immunology** (under Special Assistance Programme Department of Biochemistry-I.M.S.) (Two).

Grade: Rs. 1500-2500 (in case of appointment as Professor).

Grade: Rs. 1200-1900 (in case of appointment as Reader).

14. **Instrumentation Engineer** (One) (under Special Assistance Programme-Department of Biochemistry—I.M.S.).

Grade: Rs. 700-1300.

FACULTY OF SCIENCE & HUMANITIES

15. **Professor of Zoology** (One) (Faculty of Science).

16. **Professor of Vocal Music** (One) (Faculty of Performing Arts)

17. **Professor of Dharmashastra/Mimansa** (One) (Sanskrit Vidya Dharma Vigyan Sankay).

18. **Reader in Computer Science** (Two) (Faculty of Science)

19. **Reader in Geography** (One) (Faculty of Science).

20. **Reader in Zoology** (Cell Physiology/Biochemistry) (One) under Special Assistance Programme—Dept. of Zoology, Faculty of Science)

21. **Reader in Geophysics** (Meteorology) (One) (Faculty of Science).

22. **Reader in Geophysics** (Exploration Geophysics) (One) (Faculty of Science).

23. **Reader in Physics** (One) (Mahila Mahavidyalaya).

24. **Reader in Painting** (One) (Faculty of Visual Arts)

25. **Reader in Jain Baudh Darshan** (One) (Sanskrit Vidya Dharma Vigyan Sankay).

26. **Reader in Sankhyayoga** (One) (Sanskrit Vidya Dharma Vigyan Sankay)

27. **Reader in Persian** (One) (Faculty of Arts).

28. **Reader in Hindi** (One) (Faculty of Arts).

29. **Reader in Psychology** (One) (Faculty of Social Sciences).

30. **Reader in History** (Two) (Faculty of Social Sciences).

31. **Lecturer in Zoology** (Four) (Dept. of Zoology—Faculty of Science).

32. **Lecturer in Zoology** (One) (under Special Assistance Programme—Dept. of Zoology—Faculty of Science).

33. **Lecturer in Zoology** (One) (Dept. of Zoology—Faculty of Science)

34. **Lecturer in Philosophy / Indian Philosophy & Religion** (Two) (Faculty of Arts).

35. **Lecturer in Philosophy** (One) (Mahila Mahavidyalaya).

36. **Lecturer in Hindi** (One) (Faculty of Arts).

37. **Lecturer in Hindi** (One) (Evening College).

38. **Lecturer in Sanskrit** (One) (Faculty of Arts).

39. **Lecturer in Urdu** (One) (Mahila Mahavidyalaya).

40. **Lecturer in Urdu** (One) (Evening College).

41. **Lecturer in History** (Medieval) (One) (Faculty of Social Sciences).

42. **Lecturer in Economics** (One) (Faculty of Social Sciences).

43. **Lecturer in Nyaya** (One) (Sanskrit Vidya Dharma Vigyan Sankay).

44. **Lecturer in History of Sanskrit Literature & Philosophy** (One) (Sanskrit Vidya Dharma Vigyan Sankay).

45. **Lecturer in German** (One) (Faculty of Arts).

46. **Lecturer in Journalism & Mass Communication** (Spl. in Radio & Oral Communication (T.V. and Film Journalism) (One) (Faculty of Arts).

47. Lecturer in English (One) (Faculty of Arts).

48. Lecturer in Dance (One) (Mahila Mahavidyalaya).

49. Lecturer in Karnatak Music (One) (Faculty of Performing Arts)

50. Excavation Incharge (One) (Scheme for Developing Archaeology in the University—Dept. of A.I.H.C. & Archaeology).

Grade: Rs. 1100-1600.

51. Technical Officer (One) (Scheme for Developing Archaeology in the University—Dept. of A.I.H.C. & Archaeology).

Grade : Rs. 700-900.

FACULTY OF EDUCATION

52. Professor of Education (One).

FACULTY OF LAW

53. Reader in Law (One)

COMPUTER CENTRE

54. Systems Manager/Systems Engineer (Head of Computer Centre) (One)

Grade : Rs. 1500-2000.

55. Maintenance Engineer (Junior) (Two)

Grade : Rs. 700-1300.

56. Programmer (Two)—(1 Temporary & 1 Permanent)

Grade : Rs. 700-1300.

INSTITUTE OF AGRICULTURAL SCIENCES

57. Professor of Animal Husbandry & Dairying (One)

58. Reader in Agricultural Chemistry (One)

59. Lecturer in Agronomy (One)

60. Lecturer in Soil Science & Agricultural Chemtstry (One)

61. Lecturer in Entomology & Agricultural Zoology (One).

62. Lecturer in Horticulture (Two).

63. Lecturer in Extension Education (One).

64. Lecturer in Genetics & Plant Breeding (Two).

65. Lecturer in Agricultural Economics (One).

S.S. HOSPITAL

66. Medical Officer (Thirteen).

Grade: Rs. 700-1300.

CHIEF PROCTOR'S OFFICE

67. Security Officer (Two).

Grade: Rs. 700-1300 plus Special Pay of Rs. 150/- p.m.

PUBLIC RELATIONS OFFICE

68. Public Relations Officer (One).

Grade: Rs. 1100-50-1600.

69. Assistant Public Relations Officer (One).

Grade: Rs. 700-1300.

OTHERS

70. Editor 'Prajna' (One).

Grade: Rs. 1100-50-1600.

INSTITUTE OF TECHNOLOGY

71. Professor of Pharmacognosy (Spl. in Pharmacognosy) (One).

72. Lecturer in Pharmaceutical Chemistry (One).

73. Lecturer in Pharmacognosy (One).

74. Lecturer in Pharmacology (One)

AWADHESH PRATAP SINGH UNIVERSITY

REWA (M.P.)

No. Personnel/84/5149 **Dated: 30-6-84**

Applications on the prescribed form obtainable from the University Office on payment of Rs. 5/- (by Demand Draft or Crossed Indian Postal Order payable to the Registrar A.P.S. University, Rewa) are invited for the following posts in the University Teaching Departments. Those who want to get the form by Regd. Post may send a self addressed stamped envelope (size 23× 10cms).

Details of Posts to be filled

S. No.	Department	Number of Posts		
		Professor	Reader	Lecturer
1.	Chemistry	1	1	2
2.	Mathematics and Statistics	1	1	2
3.	Psychology	1	1	1
4.	Ancient History Culture, Archaeology	1	1	1
5.	Environmental Biology	—	—	1
6.	Business Economics	1	1	1
7.	Physics	1	—	—
	Total	6	5	8

2. The Pay Scales of the posts are:
   (1) Professor: Rs. 1500-60-1800-100-2000-125/2-2500
   (2) Reader: Rs. 1200-50-1300-60-1900
   (3) Lecturer: Rs. 700-40-1100-50-1600

3. Essential Minimum Qualifications (All Departments)

Professor: An eminent Scholar with published work of high Quality actively engaged in research. Ten years experience of teaching and/or research experience of guiding research at Doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

Reader: Good academic record with a Doctoral degree or equivalent published work. Evidence of being actively engaged in (i) Research or (ii) Innovation in teaching methods or (iii) Production of teaching materials.

About five years experience of teaching and/or research provided that at least three of these years were as lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding research work.

Explanation

For determining "good academic record" the following criteria shall be adopted.

University Reader

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree, or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

Lecturer

(a) A doctoral Degree or research work of an equally high standard;

OR

(b) Good academic record with atleast second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing inter disciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard it may relax any of the qualification prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a good academic record (weightage being given to M.Phil. or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment failing which he will not be able to earn future increments until he fulfills these requirements.

4. The pay scales carry with them the D.A. and C.P.F. benefits as per University Rule. A higher start can be given to deserving candidates.

5. Preference will be given to candidates belonging to scheduled castes and scheduled Tribes if otherwise found

suitable. Candidates already in service should apply through proper channel.

6. Applications duly filled in and accompanied with attested true copies of certificates and testimonials and Crossed Indian Postal Order or Demand Draft of Rs. 10/- (Not refundable) for the posts of Professor, Reader and Lecturer payable to the Registrar, A.P.S. University, Rewa, should reach the undersigned on or before **2nd August 1984.** Candidates from abroad may apply on a plain sheet of paper giving their biodata. Incomplete applications and applications received after the fixed date will not be considered.

7. The University reserves the right to alter the number of posts in any cadre or subject and to fill up or not to fill up the post and/or to call only selected candidates for interview at their own cost.

Dr. S.K. Mehra
REGISTRAR

INDIAN INSTITUTE OF SCIENCE

BANGALORE 560012

Advertisement No. R(IA)308-23/84
Dated : 25th June, 1984

Applications in the prescribed form are invited from candidates belonging to Scheduled Castes for one post of SCIENTIFIC OFFICER in the Centre for Electronics Design Technology at the Institute in the grade Rs. 700-40-1100-50-1300, plus allowances at Central Government rates prevailing at the Institute from time to time. Emoluments at the minimum of the scale total to Rs. 1801.95 per month (including House Rent Allowance).

Qualifications and Experience

Essential

(i) M.E./M.Tech. in Electrical/Electronics Engineering or an equivalent degree.

(ii) Familiarity with power electronics.

Desirable

(i) Experience in design and development of power electronic equipment.

(ii) Familiarity with microprocessors.

(iii) Familiarity with Electromagnetic Interferance (EMI) problems in power electronics.

Job Description

The selected candidate should

(i) undertake development work in the area of power electronics and teach courses in related electronics areas.

(ii) guide post-graduate students in their project work and

(iii) perform any other duties assigned to him from time to time.

Relaxation

The stipulation regarding qualifications and the relevant experience is relaxable at the discretion of the competen authority in the case of candidates possessing exceptionally good record and outstanding capabilities.

Tenure of Appointment

The above post is tenable for the duration of the present Plan period which is upto 31-3-1985, but is likely to continue.

Reservation

The post of SCIENTIFIC OFFICER in the CEDT is reserved for candidates belonging to SCHEDULED CASTES. However, if qualified candidates belonging to a Scheduled Caste are not available other applications from general candidates will be considered as per rules.

General

Application forms (six copies) can be obtained from the Registrar, Indian Institute of Science, Bangalore 560012, on requisition. Each request for application forms should be accompanied by a crossed Indian Postal Order for Rs. 5/- (non refundable) made payable to the Registrar, together with a self-addressed stamped (Rs. 3.30) envelope of the size of 28cms×18cms. The payment of application fee is exempted in the case of candidates belonging to Scheduled Castes/Scheduled Tribes on production of certificate from a competent authority.

The last dates are:

(a) For issue of application forms: **30th July, 1984**

(b) For receipt of completed application forms: **28th August. 1984**

Applicants in the service of Government, quasi-Government, Government-aided or similar institutions should apply through proper channel. Otherwise, their applications will not be considered.

It shall be open to the Selection Committee for a higher post to recommend a person for a lower post if a suitable candidate for the higher post is not available.

Due consideration will be given to candidates who are physically handicapped provided they are academically/scientifically sound and well qualified and generally comparable to others.

Higher starting salary may be considered to candidates with exceptional merit.

Kindly quote the advertisement No. and date in all correspondence. Candidates should ensure that applications are complete in all respects.

Detailed terms and conditions of appointment will be supplied along with the application forms.

T. Nanjunda Rao
REGISTRAR

NATIONAL INSTITUTE OF RURAL DEVELOPMENT

Rajendranagar : Hyderabad 500 030

(An organisation of the Ministry of Rural Development, Government of India)

No. 3747 : 84. Admn.
Dated : May 22, 1984

Applications are invited in the prescribed form given below for the following posts.

Centre for Micro Planning

Deputy Director—One post

Essential

(i) A first class or high second class Master's degree in Regional Planning/Economics with Ph.D., in relevant discipline or equivalent work.

(ii) At least seven years experience in research and training in the field of Micro-Level Planning and experience in handling large scale research/operational research projects and programmes in planning and management of rural development projects.

(iii) Published books/papers based on original work in the field of Micro-Level Planning/Operational research.

2. Deputy Director—One post

Essential

(i) A first or high second class Master's degree in Economics with Ph.D., in relevant discipline and equivalent work.

(ii) At least seven years experience in research and training in area planning and in handling large scale research projects in area planning in rural areas.

(iii) Published books/papers based on original work in the field of Regional Planning/Integrated Area Development and identification of growth centres.

3. Deputy Director—One post

Essential

(i) A first or high second class Master's degree in Management with Ph.D., in relevant discipline or equivalent work.

(ii) At least seven years experience in research and training and in planning and management of Rural Development projects.

(iii) Published books/papers based on original work in relevant field.

4. Deputy Director—One post

Essential

(i) A first or high second class Master's degree in Agricultural Engineering with Ph.D., in relevant discipline or equivalent work.

(ii) At least seven years experience in research and training in the field of Agricultural Engineering and allied subjects and in handling large scale research projects in rural development.

(iii) Published books/papers based on original work in the relevant field.

5. Deputy Director—One post

Essential

(i) A first or high second class Master's degree in Agronomy and Ph.D., in relevant discipline.

(ii) At least seven years experience in research and training in Agronomy and in handling large scale research projects in area planning in rural areas.

(iii) Published books/papers based on original work in the field of Agronomy.

6. Assistant Director—One post

Essential:

A first or high second class Master's degree in Regional Planning/Economics with Ph.D., or equivalent work in relevant discipline.

Desirable :

Five years experience in Socio-Economic Surveys or field studies in rural areas preferably in Area Planning.

7. Assistant Director—One post

Essential :

A first or high second class Master's degree in Economics with Ph.D., or equivalent work.

Desirable :

Five years experience in Socio-Economic Surveys or field studies in rural areas.

8. Assistant Director—One post

Essential :

A first or high second class Master's degree in Agricultural Economics with Ph.D., or equivalent work.

Desirable :

Five years experience in Socio-Economic surveys or field studies in rural areas.

9. Assistant Director—One post

Essential :

A first or high second class Master's degree in Econometrics/Mathematical Economics/Statistics with Ph.D. or equivalent work.

Desirable :

Five years experience in project analysis, project planning, programming, evaluation, and Socio-Economic surveys or field studies and training in rural development.

10. Assistant Director—One post (Reserved for SC)

Essential :

A first or high second class Master's degree in Regional Planning with Ph.D. or equivalent work.

Desirable :

Five years experience in Socio-Economic Surveys or field studies in rural areas preferably in Regional Planning.

Central for Panchayati Raj

11. Deputy Director—One post

Essential :

(i) A first class or high second class Master's degree in Political Science/Public Administration with Ph.D. or equivalent work in either of these disciplines.

(ii) At least seven years experience in research and training in the field of Panchayati Raj/Development Administration with grounding in "*Operational Dynamics of Panchayati Raj*" and experience in handling large scale research projects in rural areas.

(iii) Published papers/books based on original work in the relevant field.

12. Deputy Director—One post

Essential :

(i) A first class or high second class Master's degree in Political Science/Public Administration with Ph.D. or equivalent work in either of these disciplines.

(ii) At least seven years experience in research and training in the field of Panchayati Raj/Development Administration with grounding in "*Salient Aspects of Organisation Theory and M.B.O.*" and experience in handling large scale research projects in rural areas.

(iii) Published papers/books based on original work in relevant field.

13. Deputy Director—One post

Essential :

(i) A first or high second class Master's degree in Political Science/Public Administration/Management with Ph.D. or equivalent work in one of these disciplines.

(ii) At least seven years experience in research and training in Development Administration, with grounding in "*Delivery Systems for Rural Development*" and in handling large scale research projects in rural areas.

(iii) Published papers/books based on original work in the relevant field.

14. Assistant Director—One post

Essential :

A first or high second class Master's degree in Political Science/Public Administration/Economics, with Ph.D. or equivalent work in one of these disciplines and evidence of research in local finance.

Desirable :

(i) Five years experience in Socio-Economic surveys in rural areas.

(ii) Grounding in 'Financial Management'.

15. Assistant Director—One post (Reserved for SC)

Essential :

A first or high second class Master's degree in Political Science/Public Administration with Ph.D. or equivalent work in either of these disciplines and evidence of research in development administration.

Desirable :

(i) Five years experience in socio-economic surveys in rural areas.

(ii) Grounding in 'Salient Aspects of Organisation Theory'.

Faculty of Sociology

16. Deputy Director—One post

Essential :

(i) A first or high second class Master's degree in Sociology and Ph.D. or equivalent work in the relevant discipline.

(ii) At least seven years experience in research, training and teaching in Sociology and handling large scale sociological research projects in rural areas.

(iii) Published books/papers based on original work in Sociology.

17. Assistant Director—One post

Essential :

A first or high second class Master's degree in Sociology with Ph.D. or equivalent work in the relevant discipline.

Desirable :

Five years experience in Socio-economic surveys or field studies in rural areas.

Faculty of Information

18. Deputy Director—One post

Essential :

(i) A first or high second class Master's degree in English or any of the social sciences with a post-graduate degree or diploma in Journalism/Public Relations and Ph.D. or equivalent work in one of the disciplines.

(ii) At least seven years active exposure to modern as well as traditional mass media with ability to handle research and training projects and public relations work.

(iii) Published papers/books in the relevant field.

Faculty of Cultural Anthropology

19. Deputy Director—One post

Essential :

(i) A first or high second class Master's degree in Cultural/Social Anthropology and Ph.D. or equivalent work in the relevant discipline.

(ii) Seven years experience in research, training and teaching in Cultural/Social Anthropology.

(iii) Published books/papers based on original work in relevant discipline.

20, 21 & 22. Assistant Directors—Three posts (posts at Sl. No. 20 and 21 are reserved for S.T. and S.C. respectively).

Essential :

A first or high second class Master's degree in Cultural/Social Anthropology with Ph.D. or equivalent work in the relevant discipline.

Desirable :

Five years experience in socio-economic surveys or field studies in rural areas.

Faculty of Psychology

23. Deputy Director—One post

Essential :

(i) A first or high second class Master's degree in Psychology with specialization in Organisational/Social Psychology/ Psychometry and Ph.D. in relevant discipline or equivalent work in relevant discipline.

(ii) At least seven years experience in research and training in Organisational Psychology/Social Psychology Psychometry and in handling large scale research projects in Organisational Psychology/Social Psychology/Psychometry

(iii) Published books/Papers based on original work in the field of Organisational Psychology/Social Psychology/Psychometry.

Faculty of Rural Industries and Employment

24. Deputy Director—One post

Essential

(i) A first or high second class Master's degree in Engineering with a first or high second class Master's degree in Business Administration/Management and Ph.D. or equivalent work in the relevant discipline.

OR

A first class or high second class Master's degree in Economics/Business Management/Econometrics with Ph.D. or equivalent work in the relevant discipline.

(ii) At least seven years experience in the field of rural, small and cottage industries.

(iii) Published books/papers based on original work in the field of rural industries and employment.

Faculty of Human Resource Development

25. Deputy Director—One post

Essential

(i) A first or high second class Master's degree in any of the Social Sciences preferably in Rural Development/Social Work/Social Welfare/Social Service Administration/Education/Social Anthropology with Ph.D. or equivalent work in the relevant discipline.

(ii) At least seven years experience in training and research in areas like voluntary action, social welfare, training methodology, human development, education with reference to rural development, as also independently designing, organising and evaluating training programmes for senior level functionaries in areas specified or related areas and conducting evaluation studies, and socio-economic surveys in rural areas.

iii) Published books/papers based on original work in relevant field.

Faculty of Extension and Transfer of Technology

26. Deputy Director—One post

Essential

(i) A first class or high second class Master's degree in Agricultural Extension and Ph.D., or equivalent work in the relevant discipline.

(ii) At least seven years experience in research and training in Agriculture Extension and in handling large scale research projects.

(iii) Published books/papers based on original work in the field of Agriculture Extension.

Desirable

Specialisation and experience in the field of Appropriate Technology with reference to Rural Development Programmes.

27. Assistant Director—One post (Reserved for ST)

Essential

A first class or high second class Master's degree in Agriculture Extension with Ph.D. or equivalent work.

Desirable

Five years experience in Socio-Economic surveys or field studies in rural areas.

28 Assistant Director—One post

Essential

A first class or high second class Master's degree in Agriculture Extension with Ph.D. or equivalent work.

Desirable

(i) Five years experience in Socio-economic surveys or field studies in rural areas.

(ii) Experience of handling and production of Audio Visual Aids and use of media and channels of communication with special reference to Rural Development programmes.

Faculty of Economics

29. Assistant Director—One post

Essential

A first or high second class Master's degree in Economics with Ph.D. or equivalent work.

Desirable

Five years experience in socio-economic surveys or field studies in rural areas, on large research projects. Experience in collection and analysis of data and preparation of reports.

Regional Centre for North Eastern States at Gauhati : Assam,

30. Assistant Director—One post

Essential

A first or high second class Master's degree in Economics/Statistics with Ph.D. or equivalent work.

Desirable

Five years experience in Socio-economic surveys or field studies in rural areas.

31. Assistant Director—One post

Essential

A first or high second class Master's degree in Political Science/Public Administration with Ph.D. or equivalent work in either of these disciplines.

Desirable

Five years experience in Socio-Economic Surveys in rural areas.

32. Assistant Director—One post (Reserved for ST)

Essential

A first or high second class Master's degree in Cultural/Social Anthropology/Sociology/Psychology with Ph.D. or equivalent work in relevant discipline.

Desirable

Five years experience in Socio-Economic Surveys or field studies in rural areas.

33. Assistant Director—One post

Essential

A first class or high second class Master's degree in Regional Planning, Human Geography and Ecology with Ph.D. or equivalent work in relevant discipline.

Desirable

Five years experience in Socio-economic Surveys or field studies in rural areas preferably in Regional Planning.

Job Description of the Posts

Deputy Directors

The selected candidates are expected (i) to conduct and participate, independently, in research projects which will be inter-disciplinary, supervise and guide research workers and contribute papers on the topics that the faculty is involved (ii) to design, coordinate and conduct training programmes, independently and (iii) to attend to any other assignments as given from time to time. These requirements involve travel and out-station halts as well.

Assistant Directors

The selected candidates are expected (i) to conduct and participate in research projects which will be inter-disciplinary; supervise and guide research workers and contribute papers on the topics that the faculty is involved; (ii) to participate in training programmes of the Institute by taking sessions and preparing reading material therefor and (iii) to attend to any other assignments as given from time to time. These requirements involve travel and out-station halts as well.

Scales of Pay

Deputy Directors : Rs. 1200-50-1300-60-1900

Asst. Directors : Rs. 700-40-1100-50-1600

PLUS allowances at Central Government rates. Contributory Provident Fund benefits with Institute's contribution at 8-1/3% of pay.

Age Limit

For Assistant Directors : Below 35 years.

For posts which are reserved for Scheduled Caste/Scheduled Tribe candidates age relaxation upto 5 years is allowed as per rules.

Tenure of Appointment

The appointment will be initially for a period of five years on a contract from the date of joining the Institute subject to the conditions that: (i) the first year of such services will be regarded as a period of probation and the same will be subject to termination after a review and (ii) on the completion of the said five years term a further review will be made based on the annual assessment of his/her performance during the said period and a decision will be taken either to regularise his/her service on regular basis or to terminate the contract as the case may be.

General

An employee may be required to serve the Institute at any place and in any post not lower than the post to which he is substantively appointed.

Qualifications, experience and age requirement are relaxable in any specia cases deserving such consideration.

Higher start of pay could be considered for deserving candidates.

Candidates called for interview for the above posts will be paid second class to and fro train fare by shortest route.

Mere submission of application or fulfilling the requisite qualifications and experience does not entail the candidates for being called for interview.

Separate application is to be submitted for each post indicating the serial number of the post.

The number of posts mentioned above are likely to be reduced or increased.

The posts of Assistant Directors reserved for ST are open for appointment of officers belonging to ST from an organisation/government on deputation terms.

Applications duly completed in the prescribed form given below in all respects along with attested copies of certificates in respect of qualifications, date of birth, experience, caste etc. should reach the undersigned **on or before 23-7-1984.**

M.A. Qayum
REGISTRAR

PROFORMA OF APPLICATION FORM

1. Application for the post of:
   (a) Name in full (In capital letters)
   (b) Present Address
   (c) Father's Name
   (d) Whether belonging to SC/ST
2. Place and date of birth:

Give particulars of all examinations passed and degrees obtained at the University or other places of higher or technical education or instruction commencing with Matriculation or equivalent examinations. Attach true copies (originals to be produced when called for):

University/ Board	Examination passed	Year	Class or Division with percentage of marks and position/ rank if any	Subjects offered

4. State membership of Profession Societies, Special distinctions, if any:
5. (a) Details of Research Work and Publications:
   (b) Teaching Experience:
6. Details of employment including present one:

Office/Institution where employed	Date of joining	Date of leaving	Post held with scale of pay	Basic pay* and allowances

*State present basic pay and allowances separately.

7. Any other relevant particulars not covered in columns above:
8. Names and addresses of two references:
   1. Name :
      Status :
      Address :
   2. Name :
      Status :
      Address:

I hereby declare that all the statements made in this application form and enclosures are true to the best of my knowledge and belief.

Place:
Date :

Signature of Applicant

THE GANDHIGRAM RURAL INSTITUTE

(Deemed University)

Gandhigram : 624302 : Madurai District.

Applications are invited for the following posts on or before **30-7-1984.**

	No. of Posts
I. Reader (Scale of Rs. 1200-50-1300-60-1900)	
1. Extension	1
II. Lecturers (Scale of Pay : Rs. 700-40-1100-50-1300-EB-50-1600)	
2. Extension	1
3. Sociology	1
4. System Analysis	1
5. Co-operation	1
6. Home Science	1
7. Plant Protection	1
III. Other Posts	
8. Social Scientist cum Health Educator (Scale of Pay: Rs. 750-50-1350)	1
9. Health Inspector (Scale of Pay: Rs. 350-10-420-15-600)	2

Qualifications

Readers : Reader in Extension

A. Ph.D. degree in Extension or equivalent record of work.

B. Teaching experience in any University or College for atleast five years.

First or II class Master's Degree holder in Extension with not less than ten years teaching or extension experience in any college or University are also eligible to apply.

Experience in Gandhian constructive work and or Diploma in Gandhian Thought.

Lecturers : (Excepting item No. 4)

(a) A doctorate Degree or Research work of an equally high standard; and Good academic record with atleast second class (C in the seven point scale) Master's Degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Experience in Gandhian constructive work and/or Diploma in Gandhian Thought.

Other Posts

Item No. 4. M.B.A. (Master of Business Administration)/or any Master's Degree with System Anlaysis as one of the subjects.

Item No. 8. M.A., Sociology with Post-Graduate Diploma in Health Education.

Experience in Gandhian constructive work and/or Diploma in Gandhian Thought.

Item No. 9. S.I. Course of Gandhigram Rural Institute or by the National Council of Rural Higher Education, New Delhi with five years experience.

Age, Qualification relaxable in case of persons with outstanding experience.

Retired persons with outstanding experience may also apply.

The allowances for all the posts will be given in accordance with the rules of this Institute.

Candidates may apply giving their full Bio-data in details alongwith true copies of certificates enclosing Postal Order for Rs. 10/- payable to the Registrar, Gandhigram Rural Institute, Gandhigram 624302, Madurai District payable at Gandhigram Post Office.

Last date of the receipt of application is **30th July, 1984.**

Dr. T.R. Subramaniam
REGISTRAR

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

NOTIFICATION No. 3

Applications are invited for the following posts in prescribed forms which will be available upto **8th September, 1984** alongwith the details of qualifications and specialisations, from the undersigned on pre-payment of Crossed Indian Postal Order of Rs. 2.00 (Re. 00.50 Ps. for members of Scheduled Castes/ Scheduled Tribes) payable to Registrar, M.S. University of Baroda alongwith a self addressed envelope of 30 cms × 12 cms. for each post. **The forms will be available in person during working days only between 11.30 to 2.00 p.m.**

The applicant at the time of requesting for the prescribed forms should mention very specifically the Post Number also for which the forms are required. The Scheduled Castes/Scheduled Tribes applicants will attach a certificate to this effect.

Faculty of Arts

Professor of (1) Archaeology and Ancient History (2) Economics (3) English (4) German (5) Philosophy (6) Political Science

Reader in (7) English (8) Hindi (9) Library Science (10) Political Science (Two posts) (11) Sociology.

Lecturer in (12) Archaeology (13) Library Science (14) Linguistics (15) Philosophy (two Posts) (16) Political Science (two posts) (17) Russian (18) Sanskrit (two posts) (19) Sociology (20) Sindhi (21) Urdu.

Faculty of Education and Psychology

Reader in (22) Educational Administration

Lecturer in (23) Education

Faculty of Fine Arts

(24) Texidermist

Lecturer in (25) Applied Arts (26) Wood-carving

Faculty of Home Science

Professor of (27) Child Development (28) Home Management

Reader in (29) Foods and Nutrition

Lecturer in (30) Foods and Nutrition

Faculty of Law

(31) Reader in Law

Faculty of Management Studies

Professor of (32) Commerce including Business Administration

(33) Production Management

Faculty of Performing Arts

Reader in (34) Sitar

Lecturer in (35) Music (Department of Dance—Two Posts: One—Karnatak Music & One North Indian Music) (36) Violin

Faculty of Science

Professor of (37) Bio-Chemistry (38) Botany (39) Chemistry (Physical) (40) Geology (41) Microbiology (Two Posts) (42) Statistics (43) Zoology

Reader in (44) Bio-Chemistry (Two Posts) (45) Botany (Two Posts) (46) Chemistry (Analytical) (47) Geography (48) Geology (49) Statistics

Lecturer in (50) Biochemistry (Four (Posts) (51) Botany (52) Chemistry (53) Geology (Two Posts) (54) Mathematics (55) Microbiology (56) Physics.

Faculty of Social Work

(57) Reader in Social Work (58) Lecturer in Social Work (Two Posts)

M.K. Amin Arts and Science College and College of Commerce, Padra

(59) Physical Instructor.

Lecturer in (60) Accounts (61) Ancient Indian Culture (62) Business Management (63) Mathematics

Oriental Institute

(64) Director (65) General Editor

Faculty of Technology and Engineering

Professor of (66) Applied Chemistry (67) Architecture (68) Civil Engineering (69) Electrical Engineering (Two Posts) (70) Pharmacy (Two Posts : One for A.S.R. Centre) (71) Pharmaceutics (72) Metallurgical Engineering

Reader in (73) Applied Chemistry (74) Applied Physics (75) Architecture (76) Chemical Engineering (77) Computer Science (78) Metallurgical Engineering (79) Mechanical Engineering (Workshop) (80) Pharmacy (81) Textile Chemistry (82) Textile Engineering.

Lecturer in (83) Architecture (84) Chemical Engineering (85) Civil Engineering (Three Posts) (86) Computer Science (Two Posts) (87) Electrical Engineering (Three Posts) (88) Mechanical Engineering (89) Metallurgical Engineering (Three Posts) (90) Textile Chemistry (Two Posts)

Polytechnic

(91) Vice-Principal (92) Head of Applied Mechanics Department

(93) Sr. Instructor in Chemical Engineering (Petrochemicals Department) (Three Posts)

Lecturer in (94) Applied Mechanics (95) Civil Engineering (Three Posts) (96) Chemistry (Two Posts) (97) Electrical Engineering (Two Posts) (98) Mathematics (99) Mechanical Engineering (Five Posts) (100) Physics.

Those who have applied earlier in response to Notification No. 10, for the post of Professor of Commerce including business administration need not apply again but in case they have any additional information to supply, they may do so giving reference of their earlier application for the post.

Scale of Pay

(i) Professor/Director/General Editor : Rs. 1500-60-1800-100-2000-125/2-2500

(ii) Vice-Principal (Polytechnic) Rs. 1300-55-1520-60-1700

(iii) Reader : Rs. 1200-50-1300-60-1600-Assessment-60-1900

(iv) Head : Rs. 1100-50-1300-EB-60-1600

(v) Lecturer : Rs. 700-40-1100-50-1300-Assessment-50-1600. (Except Polytechnic)

(vi) Lecturer : (Polytechnic) : Rs. 700-40-1020-EB-45-1200-EB-50-1400

(vii) Sr. Instructor

(a) For Degree Holder : Rs. 650-30-740-35-810-EB-35-880-40-1040

(b) For Diploma Holder : Rs. 550-25-700-EB-25-750-30-900

(viii) Physical Instructor : Rs. 550-25-700-EB-25-750-30-900

(ix) Texidermist : Rs. 380-12-440-EB-12-500-EB-15-560

Reservation of Posts

(Number of Post/s reserved are mentioned in the Bracket)

Scheduled Castes (S.C.) : 14(1), 23(1), 25(1), 35(1), 51(1), 52(1), 53(1), 54(1), 56(1), 58(1), 60(1), 87(1), 88(1), 94(1), 95(1), 99(1)

Scheduled Tribes (S.T.) : 16(1), 17(1), 19(1), 36(1), 50(1), 53(1), 55(1), 58(1), 61(1), 62(1), 87(1), 89(1), 95(1), 96(1), 97(1), 98(1), 99(3).

Socially and Educationally Backward Communities (SEBC) : 12(1), 30(1), 63(1), 85(1), 87(1), 89(1), 95(1), 97(1), 99(1).

If no suitable candidates are available from SC/ST/SEBC Categories, the posts will be filled up by other candidates who are found suitable.

The Application Form duly completed be sent to the Registrar, M.S. University of Baroda, Baroda-2, alongwith the Crossed Indian Postal Order (i) for Rs. 4-00 (Re. 1-00 for SC/ST candidates) for the posts of Sr. Instructor, Physical Instructor and Texidermist (ii) for Rs. 8-00 (Rs. 2-00 for SC/ST candidates) for the post of Head and Lecturer and (iii) for Rs. 10.00 (Rs. 2-50 Ps. for SC/ST candidates) for the posts of Professor, Director, General Editor, Vice-Principal and Reader payable to the Registrar, M.S. University of Baroda on or before **29th September, 1984**.

The candidates if called for interview will have to come **at their own expenses.**

REGISTRAR

UNIVERSITY NEWS, July 16, 1984 Regd. No. R. N. 7180/63 Post Regd. No. D(C)-1080

ALIGARH MUSLIM UNIVERSITY

ALIGARH

Advertisement No. 11/84-85

Applications on the prescribed form are invited for the following posts:

Faculty of Engineering & Technology

Readers

Scale of Pay : Rs. 1200-50-1300-60-1900 plus allowances

1. **Readers in Mechanical Engineering, Department of Mechanical Engineering.**
2. **Reader in Electrical Engineering Section, University Polytechnic.**
3. **Reader in Civil Engineering Section, University Polytechnic.**

Qualifications

I-Essential

Good academic record with a Doctor's degree in a relevant field. About five years experience of teaching and/or research and development.

Provided further that candidates not possessing Ph.D. may be considered if they have to their credit equivalent research published work or design/development work of a high order either in the Institution or in an Industry.

OR

In the case of persons to be recruited from Industry or professional fields, candidate should possess good academic record with recognised professional work of about seven years which should include innovation and/or research and development.

II-Desirable

For post No. 1, Readers in Mechanical Engineering, Department of Mech. Engg.

Published research work in reputed journals, teaching experience of post-graduate classes.

Lecturers

Scale of Pay : Rs. 700-40-1100-50-1600 plus allowances.

4. **Lecturers in Mechanical Engineering, Department of Mechanical Engineering**
5. **Lecturer in Electronics Engineering Section, Women's Polytechnic**

Qualifications

(a) Master's degree in appropriate field in Engineering/Technology.

(b) Consistently good academic record with a Bachelor's degree in Engineering/Technology. First class at Bachelor's degree and/or Master's degree level.

(c) One year's relevant professional experience outside academic/research Institutions.

Having regard to the requirements of emerging fields of Engineering/Technology and of developing inter-disciplinary programmes the requirements of Engineering/Technology degrees may be waived in the cases of otherwise well qualified candidates.

Provided further that if a candidate does not possess professional experience or a person possessing such experience is not found suitable, the person appointed will be required to obtain desired professional experience within a period of five years of his appointment failing which he will not be able to earn future increments, until he fulfils this requirement.

If the candidates with M.Tech./M.E. qualifications are not available or not found suitable for appointment the essential qualifications may be relaxed and first class Engineering Graduates may be appointed subject to the condition that the candidate concerned shall have to obtain the M.Tech./M.E. degree within a period of five years failing which he will not be able to earn future increments until he acquires the prescribed qualifications.

6. **Lecturers in Costume Design & Dress Making, Women's Polytechnic**

Qualifications

I-Essential

A first or high second class Master's degree in Textiles and Clothing.

OR

A first or high second class Bachelor's degree with Home Science with first class Diploma in Costume Design & Dress Making.

II-Desirable

Two years professional/Teaching experience.

Higher initial start may be given to candidates possessing exceptional qualifications and experience. Candidates interviewed may be paid contribution towards their T.A. equal to one single second class Railway fare only.

Prescribed application forms and instructions may be had from the Assistant Registrar (Selection Committees), Registrar's Office, A.M.U., Aligarh on payment of Rs. 5/- in cash (to be deposited in the Cash Section, Finance Office, A.M.U., Aligarh) or through an Indian Postal Order payable to the Finance Officer, A.M.U., Aligarh either personally or by sending a self addressed stamped envelope of 23× 10 cm. **Last date for receipt of applications is 30th July, 1984 (during office hours). Incomplete applications and those received late will not be considered.**

Note : **Suitable persons may be kept on panel for future appointment.**

REGISTRAR

INDIAN INSTITUTE OF SCIENCE

BANGALORE 560 012

Advertisement No. R(IA) 308-21/84

Dated: 23rd June, 1984

Applications in the prescribed form are invited for the post of SCIENTIFIC OFFICER in the Centre for Microprocessor Applications at the Institute in the grade Rs. 700-40-1100-50-1300, plus allowances at Central Government rates prevailing at the Institute from time to time. Emoluments at the minimum of the scale total to Rs. 1801.95/- per month (including House Rent Allowance).

Qualifications and Experience

Essential

(i) M.E./M.Tech. in Electrical/Electronics/Physical Engineering with specialization in Electronics and/or Computers.

(ii) Familiarity with microcomputer hardware and software.

Desirable

(i) Experience in the design of micro-computer systems.

(ii) Familiarity with electronic equipment fabrication techniques.

Job Description

The selected candidate is required to (i) set-up and maintain a microprocessor laboratory; (ii) help in the organization of intensive courses in the area of microprocessors, (iii) develop special purpose microcomputer systems, and (iv) perform any other duties assigned to him.

Relaxation

The stipulation regarding qualifications and the relevant experience is relaxable at the discretion of the competent authority in the case of candidates possessing exceptionally good record and outstanding capabilities.

Tenure of Appointment

The above post is tenable for the duration of the Present Plan period which is upto 31-3-1985, but is likely to continue.

General

Application forms (six copies) can be obtained from the Registrar, Indian Institute of Science, Bangalore 560012, on requisition. Each request for application forms should be accompanied by a crossed Indian Postal Order for Rs. 5/- (non-refundable) made payable to the Registrar, together with a self-addressed stamped (Rs. 3.30) envelope of the size of 28cms× 18cms. The payment of application fee is exempted in the case of candidates belonging to Scheduled Castes/Scheduled Tribes on production of certificate from a competent authority.

The last dates are:

(a) For issue of application forms: **30th July, 1984.**

(b) For receipt of completed application forms: **28th August, 1984**

Applicants in the service of Government, quasi-Government, Government-aided or similar institutions should apply through proper channel. Otherwise, their application will not be considered.

It shall be open to the Selection Committee for a higher post to recommend a person for a lower post if a suitable candidate for the higher post is not available.

Due consideration will be given to candidates who are physically handicapped provided they are academically/scientifically sound and well qualified and generally comparable to others.

Higher starting salary may be considered to candidates with exceptional merit.

Kindly quote the advertisement No. and date in all correspondence. Candidates should ensure that applications are complete in all respects.

Detailed terms and conditions of appointment will be supplied along with the application forms.

T. Nanjunda Rao
REGISTRAR

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University News

JULY 23, 1984

Re. 1.00

GRI Convocation

Smt. Sheila Kaul, Union Minister of State for Education, delivering the Convocation Address at the Gandhigram Rural Institute (Deemed University). Seated on her right is Dr. M. Aram, Vice-Chancellor of the University.

CLASSIFIED ADVERTISEMENTS

MADURAI KAMARAJ UNIVERSITY

MADURAI-625 021

Notification No. 2/V/Advt/84

Dated : 5th July, 1984

Applications in the prescribed form are invited for the following posts in the University.

1. Department of Tamil Studies

1. One Professor of Tamil (with proficiency in Sanskrit/Hindi)
2. One Reader in Tamil (with proficiency in English)
3. One Lecturer in Journalism.

2. Tirukkural Chair

One Lecturer in Tamil

3. Department of Languages

1. One Lecturer in Kannada (with proficiency in Tamil/English)
2. One Lecturer in Malayalam (with proficiency in Tamil/English)
3. One Lecturer in Telugu (with proficiency in Tamil/English)
4. One Lecturer in Sanskrit (with proficiency in Tamil/Hindi/English)

4. Department of English & Comparative Literature

1. One Reader (with proficiency in Hindi/Sanskrit)
2. Two Lecturers

5. Department of French

1. One Reader—(Temporary)
2. One Lecturer
3. One Lecturer (with proficiency in Translation/Interpretation)

6. Department of Islamic Tamil Literature

One Lecturer

7. Gurunanak Devji Chair

1. One Reader
2. One Lecturer

8. Department of Linguistics

1. One Reader (with specialisation in Lexicography/Translation/ Transformational Grammar)
2. One Lecturer (with proficiency in Sanskrit/Hindi-Linguistics)

9. Department of History

1. One Professor of Modern History
2. One Lecturer in Museology
3. One Lecturer in Ancient History (Temporary)

10. Department of Economics

1. One Reader (with specialisation in Monetary Economics & Banking)
2. One Reader (with specialisation in Research Methodology)

11. Department of Political Science

One Lecturer (with specialisation in Public Administration)

12. Department of Education

1. One Reader (with specialisation in Educational Technology/Basic degree in Bio-sciences)
2. One Lecturer (with specialisation in Physical Sciences)

13. Department of Geography

1. One Reader (with specialisation in Cartography)
2. One Lecturer (temporary)

14. Department of Gandhian Studies & Ramalingam Philosophy

One Reader

15. Department of Saiva Siddhanta Philosophy

Two Lecturers

16. Department of Management Studies

One Reader

17. Department of Library & Information Science

One Lecturer

18. Department of Plant Sciences

1. One Professor (with specialisation in Ultrastructure)
2. One Reader (with specialisation in Tissue Culture)

19. Department of Bio-Chemistry

One Lecturer

20. School of Chemistry

1. One Professor (with specialisation in Inorganic Chemistry)
2. One Reader (with specialisation in Physical Organic Chemistry)
3. One Reader (with specialisation in Terpenoids, alkaloids, Carbohydrates or Polypeptides)

21. School of Mathematics

1. One Professor of Statistics
2. One Professor (with specialisation in Algebra/Analysis)
3. One Professor (with specialisation in Algebra preferably commutative Algebra, Algebraic Geometry)
4. One Professor (with specialisation in Analysis)
5. One Reader (with specialisation in Algebra preferably commutative Algebra, Algebraic Geometry)
6. One Reader (with specialisation in Analysis)
7. One Reader (with specialisation in Applied Mathematics)
8. Two Lecturers in Mathematics.

22. School of Physics

1. One Reader
2. Two Lecturers
3. One Lecturer (Temporary)

23. School of Energy, Environment & Natural Resources

Two Readers

24. Computer Centre

1. One Reader in Computer Science & Applications
2. Two Lecturers in Computer Science & Applications

25. Department of Physical Education

One Director of Physical Education

26. Department of National Service Scheme (NSS)

One Programme Co-ordinator

27. Department of Adult Education & Extension Programme

Two Project Officers

28. Institute of Correspondence Course & Continuing Education

1. On Professor of History
2. One Professor of Economics

29. Post-Graduate Extension Centre at Palayamkottai Department of Sociology

1. One Professor (with specialisation in Rural Sociology & Rural Development)
2. Two Readers (with specialisation in Rural Sociology & Rural Development)
3. One Reader in Sociology

Scales of Pay

Professor: Rs. 1500-60-1800-100-2000-125/2-2500

Reader/Director of Physical Education/Programme Co-ordinator (NSS): Rs. 1200-50-1300-60-1900

Lecturer: Rs. 700-40-1100-50-1600

Project Officer under Adult Education & Extension Programme : Rs. 700-40-1100-50-1300

Appointment of persons on deputation will also be considered, if the candidates are found suitable and the employer is agreeable to spare the services.

The prescribed form of application (in 8 copies) and full details regarding qualifications and experience required can be got from the undersigned on requisition accompanied by (1) a self-addressed envelope with postage stamps to the value of Rs. 2-30 ps. affixed thereon and (2) a State Bank of India challan for Rs. 10/- (Account No. 1 of the Madurai Kamaraj University) or Demand Draft for Rs. 10/- payable at Madurai drawn in favour of the REGISTRAR, MADURAI KAMARAJ UNIVERSITY, MADURAI-625021.

The number of the notification should be quoted in the requisition i.e. No. 2/V/Advt/84.

The last date for receipt of filled in applications is **10th August, 1984**. Applications received after the due date will not be considered.

P.P. Chinnadurai
REGISTRAR

UNIVERSITY NEWS

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Editor :
M. S. RAMAMURTHY

A Report

UGC Seminar on Modern British Fiction

A UGC sponsored seminar on "Modern British Fiction" with special reference to Paul Scott, Angus Wilson and William Golding" was held at Government Postgraduate College, Dharamsala (HP) from 18 June to 23 June, 1984. The seminar was designed to achieve two objectives : first, to acquaint college teachers in Himachal Pradesh with major trends and developments in Modern British Fiction; second, to familiarise them specifically with Paul Scott, Angus Wilson and William Golding as representative modern fiction Writers. Twenty-five lecturers in English drawn from ten Colleges of Himachal Pradesh participated.

Shri Shiv Kumar Upmanyu, Hon'able Minister for Higher Education, Himachal Pradesh, inaugurated the seminar on 18 June, 1984. In his presidential remarks he appreciated the theme of the seminar and suggested that participants may also study our system of higher education and make some concrete suggestions for its improvement. The Hon'ble Minister also inaugurated two book exhibitions—one put up by the H.P. Sahitya Academy (Shimla), and the other by the host college—and released a recent publication of Dr. Atma Ram entitled Interviews with Indian English Writers (Writers Workshop, Calcutta).

The seminar took the shape of a lecture series by outstanding teachers in particular fields followed by intensive discussions by the participating members. In eleven sessions six research papers were presented and discussed in detail.

In a (prolonged) session on higher education, the seminarians dwelt on various aspects of the system and suggested workable steps to make it relevant and purposeful for the community. The following measures were suggested:

Job-Oriented education, Restriction on admission, clear definition of the purpose of education, greater emphasis on improvement in school education, more involvement of teacher in the teaching-learning process, adoption of grading system, integrated and practical approach to education.

The participants, all being teachers of English, made the following suggestions for improvement in standards of English : A workable teacher-taught ratio, more attention to the teaching of English language at the College level, orientation courses and exhaustive training to teachers in ELT, clarity on objectives of teaching English in Colleges and preparation of text-books accordingly, remedial courses for weak students, introduction of workbook system and situational teaching, preparation of question papers containing essay-type, short-answer type and objective type questions.

It was a six-day seminar with two sessions a day.

This seminar, (the first of its kind in Himachal Pradesh), had many distinctive features. Its theme was both meaningful and challenging : British Fiction of the nineteen fifties and after, the literature not usually prescribed for studies in Colleges and Universities in India. Instead of movements or general trend, the authors of papers analysed at length various texts or central motifs. There was sufficient time for elaborate discussions and reflection, as nothing was hustled through, and, more importantly, the participants had a chance to evaluate the seminar on a given proforma. Most of them found it quite beneficial, interesting and enjoyable.

Apathy in our Universities

D. P. Verma*

The none too enthusing a situation obtaining in a large number of our universities and other institutions of higher education could perhaps be reflected in one word—'apathy'. To a very great extent, it is this sluggish and slumberous habit that is responsible for the sordid state of things, leading to a steep fall in the standards of teaching and research and also in the efficiency level of the support-services. The famous French thinker, Montesquieu said: "The tyranny of a Prince in an oligarchy is not so dangerous to the public welfare, as the apathy of a citizen in a democracy." And when it afflicts the universities, their working is, more or less, paralysed. Except for a microscopic minority in each of the three main segments of the university system, who are deeply wedded to their respective assignments, a very large component in each consists of those, who in one way or the other, suffer from some form of apoplexy, for one finds in them, the lack or loss of power 'to feel', 'to move' and 'to think'—the last one is, of course, very conspicuous by its absence among the many. 'Pursuit of the routine' is sufficient to preserve one's interests. The students are concerned with 'routine studies'—made up of courses that are in no way relevant to the breath-taking changes occurring around; their studies culminate in the ritual of 'routine examinations', which have, at least so far, defied all attempts to change. This outmoded system continues to stick, notwithstanding all the carping criticism against it. Most of the faculty finds it very difficult to keep pace with the knowledge which after every 6 or 7 years is becoming double. They do not perhaps have the wherewithal to do so. They tend to believe that lack of essential facilities retard their professional growth to a very great extent. And so, for no fault of theirs, they are hardly left with any alternative but to transmit, year after year, all that they had learnt two or three decades ago. And for the men in the administrative set-up, it is something of a sin to look beyond the nose. Their main accomplishment is to safeguard the 'routine channels' of work They are not so much interested in the 'work-flow' measurements and analysis etc. Their primary concern is to ensure that the 'hurdle-race' is made harder, with all possible obstructions. They are 'prisoners of routine'. They do not appreciate any innovative measures to disturb their placid activities.

The university scene is comparable to a big but soft hill where most of the time one generally finds the growth of dry grass, interspersed with a few flower-bearing shrubs at certain scattered spots only. These 'freaks' however, are so few and far between that the barrenness of the hill ever remains so vivid. It is a pity that the institutions which should be vibrant springs of fresh thoughts and ideas have come to be like still and stagnant pools with their waters covered with lot of moss. The reason for this sorry spectacle is the lack of verve in the performance of work by those who have somehow or the other found their way into the universities and colleges and have steadily succeeded in digging themselves in certain vantage positions as well, which further enables them to play havoc with the whole system of higher education. The decay that has set in is primarily because of the low quality of the human element that has come to man the country's most delicate and delectable assignments. Instead of being lost in their pursuits which are of higher order, our academics and researchers and others are lost in the rigmarole of petty things.

It appears that the very concept of dedication took leave of us quite long ago. We are now intensely involved in the pursuit of our self-interests at the cost of everything else. We have become the creatures of the existing polluted social environment, instead of being the creators of a refined and elevating social set-up. We are not concerned with the promotion of those values which enrich or sustain life at a higher pedestal. Our main concern today is to seek avenues which bring easy returns without the encumbrances of sweat, and toil. As a matter of fact, to think in terms of 'dedication' and 'values' and the like is to live in a fool's world. We have become a self-centred lot. It was quite anguishing to find the teachers of the colleges recently staging 'dharnas' etc. in support of some of their not so pressing demands, when unfortunately the whole of this region is almost afire because of the communal frenzy. We are unconcerned with what is happening around us, what is threatening the very fabric of our society. Instead of thinking in terms of doing something concrete to bring back sanity and harmony, what we do, wittingly or unwittingly, is to add fuel to the fire by organising agitations etc. This is a typical instance that indicates our orientation. **We constitute a community sans imagination, sans vision. We are not imbued with any social purpose.**

There is no dearth of talk to find ways and means to improve our standards of education. People almost in all walks of life feel concerned about it. But those who are in the system itself, the teachers and the others, have hardly done anything worthwhile to contribute towards this end. It is primarily our problem; it is mainly our concern but we just grope in the darkness. Any number of suggestions or proposals from the top would not break the ice. Unless the teachers awake to their responsibilities in eradicating the ills afflicting the system, no change for the better will occur. The proposals emanating from the U.G.C., the A.I.U. and those formulated at the various conferences and seminars have mostly fallen

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**Registrar, Panjab University, Chandigarh.*

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on deaf ears and dull minds. No amount of propelling from without will yield anything. It is a matter of something emerging from within, and when that comes to happen, the landscape would change immensely. But for the present there is hardly any indication that the gloom will be dispelled. Our involvement in petty pursuits do not permit us to think of bigger issues. There are some, who have it in them to provide necessary direction and infuse new life into the system. But somehow or the other they have surrendered themselves, rather meekly, into accepting what is being practised. So long as these first rate minds do not take the trouble of giving expression to what they really feel and think, the system will continue to languish. There are some compulsions, some constraints that do not permit even promising people to go beyond doing routine work. The question of taking any conceivable steps to spell a new outlook, to foster new ideas and initiate new experiments hardly agitates any one. We do clamour for 'increasing monetary returns', stake claims for the immediate release of benefits like 'interim relief' and the like. This has become the sum and substance of our aspirations and longing. We are not inspired by any value system enriching our mental make-up. We have, like others, fallen a prey to the trivialities of a wholly material life-pattern.

There has been considerable stress on the desirability of bringing about the long-over due reforms in our system of examination. Notwithstanding all the efforts made, money expended, seminars and conferences organised, nothing tangible and worthwhile has been done to bring about the reforms by the universities and colleges. The apathy to change doggedly persists. Some half-hearted measures, no doubt, were taken here and there but they proved to be counter-productive and soon we were back to square *one*. Even more agonising is the fact that a large majority of the teachers, especially in the colleges, and administrative staff members holding senior positions are not even aware of what is contained in the various reports and recommendations made from time, to time much less knowing the ways these are to be given a practical shape. It may be interesting to note that at a meeting of an important council, during the course of a discussion on some routine matters, a few members referred to the need for streamlining the procedures etc. for the conduct of examinations. The suggestions only centred round payment of proper remunerations so that reliable persons could come forward to undertake the work. One knowledgeable member had the audacity to tell the learned council to come out of the narrow groove and instead of talking only of remunerations and other routine matters, requested them to take due note of some very important and vital proposals made by the U.G.C. and the A.I.U. on examination reforms and do something to implement them in letter and spirit. Surprisingly, most of the persons present knew nothing of any such proposals and desired the University authorities to procure copies of the brochures or booklets or other documents containing the proposals and distribute them among the members so that they could know what those recommendations were. Such is the state of indifference and apathy of our educationists who have been vested with the responsibility of handling the system of higher education at different levels. And some faltering steps taken have brought disappointing results. The experiment with the semester system in some of the post-graduate courses at the university level has more or less, miserably failed. This has left everyone disillusioned. It is so because what was put into effect was a mere shadow of the system, leaving the substance behind. It was bound to lead to disappointing outcome.

It has been stated ad nauseam that the education imparted in our universities and colleges is to a very great extent not relevant to the needs of our society and that these institutions are recklessly adding to the number of educated unemployed. There is considerable substance in the charge. Let us take one small and simple example. We have a parliamentary system of government in our country. It is a system of government where matters are thrashed out through debates and discussions etc. on the floor of the legislative bodies. The system needs those who can dispassionately argue, who have the power of quick repartee, it needs men with a good sense of humour, and some other qualities like spontaniety etc. We are not tired of haranguing that the students of today are the leaders of tomorrow. But in our universities and colleges, at least in this part of the country, it is difficult to find even one instance where anything consciously has been done to provide the much needed opportunities for the training to shape and groom the students into good orators and effective debators. Our extra-curricular activities are mostly adorned by what is called 'declamation contests'—that only involves memorising a text prepared by someone else and which, sometimes without being even understood, is just mechanically reproduced in the presence of an audience. Lot of fanfare is made for the prizes won for such 'feats'. The students cram answers for their examinations. And even for this semblance of an extra-curricular activity, they are required to cram again and do what parrots are required to do. Do we, in the universities and colleges, have no responsibility in initiating some of the promising young students to acquire those skills that would enable them to grow into able parliamentarians? There is no inclination, no enthusiasm to promote any such activity and it is not regarded as a part of one's assignment. Crammers and rote-learners would not be in a position to deliver the goods. Many aspects of our life are languishing because the system of higher education is not at all responsive to its needs and requirements. It is again the result of apathy. There is no involvement, no keenness to mould and shape the careers of the students in desirable directions. We have ceased to have any such concern. We just refuse to go beyond the periphery of the routine assignments in which we have specialised.

Comparative security provided by the system of employment in the universities has to a considerable extent lulled us to slumber. No sooner the short-lived period of probation comes to an end, then the 'era of ease', of adrift begins. Particularly in the administrative set-up, most of us wait for promotions which usually come by seniority; only a few sweat for it, work for it. The reward for painstaking work pursued in honest ways are quite scarce. Easier methods of placating the persons who matter, yield quicker fruit and so the much-liked game of sycophancy begins, and continues ceaselessly, for there is no end to the ambitions of those who hardly deserve what they get.

The universities have their own panacea for almost all the problems that surface and it is to hold seminars as early as possible. And these seminars are organised with considerable fanfare. Before these 'fairs' actually take place, an air of optimism pervades. It is made to appear that our learned men are putting their heads together and out of their deliberations some very viable and concrete solutions would emerge which would help us overcome our problems. With an exception here and there, the 'inaugurals' are studded with lot of ceremonies; and there is quite a 'dose of sermons'. The subsequent deliberations are projected as exacting and strenuous. Serious efforts for good press-coverage are usually made. After that hardly anything is known of the outcome of the deliberations. It is not being suggested that the holding of seminars or workshops serves no purpose; far from that. It would, however, be desirable to devise a mechanism to objectively evaluate, assess and report to the sponsoring authorities so that some system of accountability is ensured. Reports prepared in a routine manner serve no purpose and merely gather dust in the offices of such authorities. It may also be observed that there is dearth of inter-departmental coordination and cooperation in holding the seminars. Sometimes different departments secure grants from different sources or agencies for sponsoring seminars on, more or less, similar subjects or themes. If joint ventures are made in such matters perhaps better results could flow and certainly the expenditure could be substantially reduced. It, however, appears that the actual emphasis seems to be on 'divergence' and not on 'convergence'.

Without in any way diluting university autonomy, it has become imperative to devise a monitoring system for the work done in our universities, including the work done in the administrative set-up. As a matter of fact, the universities need to devise such a system of their own. With no monitoring system in vogue, the habit of not doing even the normal quantum of work is being treated by some as a matter of right. It is not being suggested to bring in any type of interference or to infringe in any way the right of the academics to hold their own opinions and to project them as they think best. The aim of monitoring should be to dispel inertia and to ensure that people would not only address themselves earnestly to the work assigned to their cares, but those who make definite contributions in their own fields are not left to feel ignored and frustrated for want of proper recognition of their work. If the people in the universities and colleges were discharging their duties conscientiously and purposefully, then the need for such a step would never have been felt. If in some countries there is a system of retaining people only on the basis of the contributions made and work done by them, then why should not we devise some mechanism to instil a sense of purpose and seriousness amongst us to do our work in a manner that would produce tangible results. Why should excessive security system be allowed to place premium on doing nothing. Such a scheme, if ever devised and brought into operation, could also be used to provide necessary assistance in coordinating the common programmes and submitting the assessment of the actual achievements gained at the conferences, workshops and seminars etc. to the authorities concerned. The universities could utilise for this purpose the services of persons of known integrity and objectivity whose contributions in their academic or administrative fields are well recognised. Association of such eminent and worthy persons, who have no axe to grind, and who do not belong to any factions or groups within or outside the university, should not be open to any objections. What needs to be ensured is to secure the help of really first rate minds, irrespective of the place or region to which they belong. Dereliction of duty has become a rampant phenomenon because of the lack of any in-built system of accountability, compounded by unchallengable security. We take our assignments lightly, and to avoid doing work as much as possible has become the hall-mark of our character. This primarily accounts for the snail like speed with which our universities move. It is reiterated that autonomy of the universities as such must at all costs be protected, but equally important is to devise some ways and means that could at least to some extent ensure that we do not constantly falter in the performance of our work and that we make some useful contributions in our assignments. Without some such system coming into operation, the change for the better would not come about. **The 'academic-autumn' would continue to linger and the spring would remain far behind.** Those who have come to believe that without work the going is good for them must be shaken out of their slumber and apathy. A sense of time and a sense of urgency must be made to dawn on our men in the institutions of higher education. Those who really are wedded to their work need have no apprehensions of any monitoring system. It may induce others to work and help in shaking off, to some extent, their monumental apathy.

It is not only apathy and callousness towards work, but also lack of appreciation of the concept of discipline that has come to greatly jeopardise the functioning of our universities and colleges. We usually blame the students for paralysing instructional programmes even at the slightest pretext. But then there are others who are no less to be blamed for doing irreparable damage to the very fabric of the educational system. The ire of the students generally is shortlived even when on occasions they indulge in the wanton destruction of public property and are guilty of other acts of misdemeanour and misbehaviour. But what incalculable harm these 'grabbers' of the institutions of higher education inflict can only be visualised by those who actually see their operations.

It would require a measure of boldness to expose their misdeeds. Their entire energies are focussed in so manipulating things that they remain entrenched in the positions of power for long years, with some actually acquiring a halo of indispensibility. For them no holds are barred. They contribute nothing; they are there to distribute favours to some who in turn would do things at their biddings. Such people, without any qualms of conscience claim to serve the system. Of course, they do serve but themselves. There are a few honourable exceptions, men who have set values, who abide by what they say, who feel for the institutions with which they are associated. But such men of goodwill are finding it difficult to halt the adrift, to counteract the deficiencies in the decision-making processes. **Goodness has become dormant, the crooked are ruling the roost**. The way the 'manipulators' operate the governing apparatus cannot but make it rapidly slide down the inclined plane. These men are very assertive of their own rights and appallingly apathetic to what is provided for in the statutes and ordinances and the like. Their interests and that of their henchmen must supersede everything else and if the statutes stand in the way, they must be made to bend, if not set aside. With small men at the helm of affairs, great goals can never be attained. The ramparts of great institutions do not stand on small hearts and narrow outlook. It is this that is besetting the system of higher education in the country and unless we get rid of this curse, there is not much hope that a new era will dawn.

The symptoms of the malaise are so obvious. There is an amazing degree of intolerance for those who have the temerity to take up a stand and say that the rules and fair decisions have some role to play. The self-centred persons are not at all concerned with the incredible harm done to the structure by their attitude. The universities have always felt concerned and rightly so about the frequent inroads into their autonomy and some have successfully resisted such unwholesome exercises. But the onslaughts from within are far more difficult to withstand. Many of us are, more or less, committed to self-centredness. We seek to weigh and judge everything in this context. This to a great extent stands in the way of progress; it obstinately obstructs the path of change. With most of the things revolving round self-interest, ignorance, inefficiency and incompetence have got an edge over talent and calibre. As a matter of fact, these qualities have been relegated to the backwaters. It is not the quality of mind that is regarded as important. We appreciate acquiesance, we like only flattering expressions. Persons who have something in them, who dare say what they think to be correct are kept at bay. Such men have dangerous potentialities; fresh ideas and thoughts sprout in their minds which are usually not acceptable, and so they must be kept at a safe distance. The even pace and tenor of academic life has to be maintained and persons who even cause ripples by projecting their unorthodox views need always to be contained. The real potentates like those people who prostrate and not those who position their heads high. Those who refuse to 'bend' or make 'compromises' are pushed out of the mainstream and confined to some obscure corner. Sometimes even ways are devised to put such men out of the system.

More often than not, one is impelled to feel that there is hardly anything inspiring in our universities. We do not have before us any lofty heights to scale. We revel in pettiness. Work does not thrill us. Most of us lack alacrity in doing our jobs. It is regarded as a 'back-breaking-burden', something to be avoided as far as possible. We have developed a vested interest in the continuance of the present system which has made life that easy for us. The changes proposed from time to time are fraught with dangers, for these when implemented might entail heavier responsibilities to be shouldered. We have scant concern for the problems that have engulfed the people and the society. We regard it as none of our business to think about these, much less proffering any solutions. Like spent-up battery cells, we hav no power to emit light. When a very senior and eminent educationist—a member of the Fourth Pay Commission—during the course of a one-day seminar invited the universities to conduct in-depth studies of various issues relating to the economy and service matters etc., the suggestion was implied that the universities have been quite apathetic in addressing themselves to such worthwhile exercises.

In short, our universities are to-day dominated by small men, by hypocrites, by tale-carriers and by 'praising-parrots'. It is these who flourish. The talented few, on account of the environmental compulsions, either leave or withdraw into a shell under a self-denying ordinance. This leaves the field free for the self-seekers, for the incompetent oafs who could do nothing but bow and scrape before their 'masters'. Competence mostly is under a cloud everywhere in the country and universities are no exception. We have become adapt in upgrading incompetence and in denigrating excellence. It was John Stuart Mill who had very aptly pointed out that with small men no great things can really be accomplished. ☐

Smt. Sheila Kaul Addresses Convocation of Gandhigram Rural Institute

Given below is the text of the Convocation Address delivered by Smt. Sheila Kaul, Union Minister of State for Education, at the Gandhigram Rural Institute (Deemed University), on May 25, 1984.

Convocation

“I am happy to be with you today and to be associated with the Convocation which has been organised for conferring degrees on the graduating students of this University. Your Institute represents an aspiration that came to be cherished since the period of the freedom struggle. That education should be related to the needs of the nation was clearly visualised by the leading nationalists who were also profound educationists. Unfortunately, the passions, dreams and visions of these leaders could not find adequate expression in the colleges and universities that came to flourish during the post independence period. Your Institute is, however, an exception, and the story of the development of your Institute presents an account of a silent but solid record of work and achievement, reflecting the spirit of the ideals that inspired the establishment of the Institute. There is in this Institute a remarkable restraint, denial of outer show of prestigious buildings, but a pleasing harmony between the rural landscape and the austere charm of the atmosphere. Indeed, your Institute reflects the profound qualities of the Indian rural people to whose service it is so deeply devoted.

India lives in its villages, and it is a vain chimera to imagine that India can be developed by ignoring or subordinating the demands of rural development. It is not by accident that India has remained predominantly rural throughout its history. The social builders of ancient India had rightly perceived that the individual grows best in a decentralised economy and polity. They took, therefore, great pains to design Indian life in such a way that small communities grow and flourish without being adversely affected by political or military upheavals and convulsions. They devoted, therefore, their energies in fashioning a culture that could sustain the right relationship between the individual, community, nation and the human race-sacrificing none of them but preserving always the dignity of the individual and the group against any massive effort that might dwarf them and impoverish them. In this light, we might say that it was by design that India has remained rural, and whenever there has been an attempt to mutilate this design, there has been a disastrous eclipse or collapse of our prosperity and richness. This is illustrated by what happened to India during the British rule. For the British struck a deadly blow on the rural life of India, and India was reduced to abject poverty from the curse of which we have not been able to liberate ourselves to any desirable extent even after 37 years of independence.

It is against this background that our planning under the inspiring leadership of Jawaharlal Nehru underlined the crucial importance of rural development I am afraid, however, that the message of rural development has not still struck deep roots in the thinking of a large number of educationists, administrators and planners. And that is the reason why we are still lagging behind and we need to reiterate the importance of the village and its problems, whether of agriculture, animal husbandry, economy, marketing, sociology or polity.

It has been rightly said that we must adopt an integrated approach to the problems of rural development. And I am happy that one of the major objectives of your Institute is to function as a centre for extension work leading to integrated rural development, The studies and research that your Institute have been conducting in this connection provide valuable guidance to all of us. As I understand it, your experience has shown that education is an indispensable part of integrated rural development. In other words, you have reiterated the fundamental objectives and thrusts that lay behind the constructive programme that came to be formulated during the freedom struggle. It was at that time that the ideals of basic education came to be conceived and advocated. As a matter of fact, basic education was conceived precisely to meet the needs of integrated rural development. It is by an error of judgment and by misreading of its message that basic education came to be equated by many people exclusively with craft education. It is true that basic education did lay an emphasis on craft education, but its goal was integrated development both of the human personality and of the society. That the foundations of basic education lay in principles of ethical and spiritual development has often been ignored or even obliterated. Basic education made it very clear that mere economic development will turn to dust and ashes if it is not rooted in the deeper and wider development of a profound educational ethical and spiritual culture. Pursuit of truth was the first principle of basic education; all the rest came as a corollary. I am happy to say that as I read the accounts of your Institute's achievements, I feel that the builders of your Institute have had a clearer perception and grasp of this fundamental basis of basic education. It is for this reason, I think, that you have succeeded while many others have failed.

In the advancing world where science and technology are progressing with a rushing speed, we need to look deeply into the issues that confront our rural society, particularly those which relate to the transfer of technical know-how to the rural areas. In this context, we must make a distinction between excessive and injurious industrialisation, on the one hand, and the right development of industry and prosperity, on the other. We need to clarify to ourselves that poverty can never be made a national objective, even though, at an individual level, voluntary poverty can be practised as an ethical austerity. Nationally, we must aim at prosperity. And it should be obvious that prosperity cannot be achieved without the right use of industry and without the right application of science and technology to various domains of the village life. Transfer of technical know-how, therefore, is indispensable. But we must be extremely cautious to ensure that the development of industry does not result in excessive industrialism which overpasses the limits of the optimum and presses ever increasingly for maximisation. And the distinction between the optimum and the maximum is so subtle that the social planners must exercise an intelligent and vigilant scruple to accept the limits of the optimum and to reject the temptations of the excesses of the maximum. "The small is beautiful," it has now begun to be realised. But it is not easy, particularly under the pressure of sceintific and technological development, to keep the boundaries of the small within reasonable and optimum limits. It is, therefore, necessary that our educational system produces the right type of economic and social thinkers who can guide the development of the Indian village towards prosperity without allowing the curse of anti-cultural mechanisation and competitive capitalism. I am happy to note that your Institute is engaged assiduously and vigorously in fashioning young people into the right type of rural economists and scientists who can take the right precautionary measures that are required to develop Indian rural life on the principles which are inherent both in basic education and in integrated rural development.

There are five areas which seem extremely important in the context of the rural development. These are (i) afforestation, (ii) soil conservation, (iii) water conservation, (iv) utilisation of solar energy, wind energy and bio-gas, and lastly (v) transport facilities. I believe that if rural youths could be given meaningful training in regard to these five areas, then they could become effective soldiers of national service. I am aware that in the programmes that you are pursuing at your Institute these areas are receiving adequate attention. What I wish, however, is that every student in our universities should have training in this direction, and at the minimum level, this should be recommended as an integral part of the programme of N.S.S. (National Service Scheme).

I am extremely happy to learn that your Institute has laid special emphasis on micro planning. The objectives that you are pursuing in regard to extension activities are based upon the principles of micro planning, and it is refreshing to know that you have been achieving a remarkable success in your programmes relating to literacy, employment, population growth and lowering of the poverty line. It is heartening that you have achieved in your adopted areas of extension work cent per cent literacy, cent per cent employment and zero per cent population growth. In regard to the lowering of poverty line, you have succeeded in reducing the poverty line to the level of 10% and that you aim at bringing it down to zero per cent. I should like to felicitate the Vice-Chancellor and his colleagues for achieving this high level of success.

I am glad that you are planing to have a central library, and I shall have the pleasure of laying the foundation stone for the new building that will house this Library. The Library, is now being increasingly looked upon as the central venue of learning, and I am sure that the authorities of the Institute will bestow the necessary care on organising this Library in such a way that students would be provided with modern amenities of easy retrieval, documentation and micro-filming. You have already a good infra-structure and this Library, I am sure, will be a valuable addition that will enrich the infra-structure.

The students who have studied at this Institute are indeed privileged. Not only have they received training in subjects which are relevant to India's basic needs, but they have also learnt through atmosphere and through instruction the basic ideals that we wish to embody, both individually and socially. They have had also the privilege of coming into contact with personalities like Dr. Aram, the Vice-Chancellor, and, above all, your illustrious Chancellor. Dr. (Smt) T. S. Soundaram, who is a well-known figure in the field of constructive work and women's and children's welfare. As the founder and builder of this vast complex, she has an inalienable relationship with this Institute, and her influence is perceptibly or impereeptibly present in this Institute.

Mankind is passing today through a great crisis. Different explanations have been offered to explain the nature and cause of this crisis. But if we try to understand this crisis in the light of the Indian wisdom, we find that it is result of a growing dis-equilibrium between the outer man and the internal man. Externally, man has built up huge edifices of commerce, industry and technology. Externally, man has travelled to the moon and cosmonauts have succeeded in conducting experiments even in the sky laboratory in distant space. But internally he is confined within the narrow limits of a superficial personality. Internally, he is unable to cross the boundaries of his petty egoism and selfishness. He is unable to travel in the infinite sky of his inner soul and spirit. This has resulted in an imbalance and man is unable to find a remedy by which this imbalance can be cured. The resulting crisis has rendered the contemporary man into a helpless spectator of events, and he is unable to discover the inner sources of creativity and happy fulfilment. The greatest task before the human race is, therefore, to build up a new science and art of living in which the outer and the inner man can find an ever-progressive equation.

In conclusion I would like to express my hope that the youths who will be receiving their degrees today will continue to spread the message of rural development, and they will continue to develop those qualities and attributes which will enable them to become the radiating centres of the ideals for which this Institute has been established." ☐

Rajasthan University Introduces Legal Aid as Extension Service

The University of Rajasthan has recently set up a "Rajasthan University Legal Aid Clinic for the Poor". This Legal Aid Clinic besides working as the Legal Aid Clinic in the University Law College, will also coordinate Legal Aid Clinics in the affiliated colleges.

The Legal Aid Clinic for the Poor has a two-tier Committee system; Management Committee and Executive Committee. The Management Committee has Patron, Professor TKN Unnithan, Vice-Chancellor of the University. Other prominent members are Mr. Justice B.P. Beri, Retired Chief Justice of the State of Rajasthan, as the Chairman; Hon'ble Justice Mr. D.L. Mehta, Chairman State Legal Aid Committee; Hon'ble Mr. Justice V.S. Dave; Shri N.L. Jain Advocate-General of the State of Rajasthan; Shri Jagdeep Dhanker, Advocate; Professor I.C. Saxena, Principal, University Law College and Dean of the Faculty of Law. The Executive Committee consists of Mr. Justice B.P. Beri, Retired Chief Justice of the State, as its Chairman with four more members.

The Rajasthan University Legal Aid Clinic for the Poor was inaugurated by Mr. Justice V.R. Krishna Iyer, Retired Judge of the Supreme Court of India on 27th April, 1984.

The Legal Aid Clinic was addressed by Hon'ble Mr. Justice P.N. Bhagwati, Judge, Supreme Court of India. Various schemes of Legal Aid to the Poor were discussed at the meeting.

The Executive Committee of the Legal Aid Clinic for the poor under the Chairmanship of Mr. Justice B.P. Beri has formulated a project to interview undertrials and to study the compliance of Prison Laws. The project has been submitted to the Government of Rajasthan, and as soon as permission to interview the undertrials is received, the survey work will begin.

Other legal aid programmes are being chalked out.

Justice P.N. Bhagwati, addressing the Legal Aid Clinic at Rajasthan University. On his right are Justice B.P. Beri and Prof. T.K.N. Unnithan, Vice-Chancellor of the University.

Kumaun University : Nainital

The Kumaun University came into existence in 1973 with the two Government Post-graduate Colleges, situated at Nainital and Almora, as its nucleus. These constituent colleges used to impart postgraduate education in Science, Arts & Commerce. In course of time Education and Law faculties were added. Now there are 21 departments in these two constituent colleges which form the residential wing of the University. Besides, 13 more Colleges of the Kumaun region are affiliated to the University.

Dr. (Mrs) Madhuri R. Shah, Chairman, UGC, discussing requirements and problems of Kumaun University with Prof. S.N. Srivastava, Vice-Chancellor of the University.

During the past decade, the University has increased its academic, research and instructional activities. There are now 17 Professors, 34 Readers and 189 Lecturers. Its physical assets too have increased. The minimum requirements for recognition by U.G.C., namely, the positioning of senior staff and assets of two crores, having been fulfilled, a panel of the Commission, Chairperson Smt. Madhuri Shah and other members, visited Nainital and Almora campuses in June this year. They had detailed discussions with the Vice-Chancellor, the Registrar, Finance Officer and Deans of various faculties.

Being satisfied with the performance of the University, the Commission has now granted recognition to the University. An amount of Rupees Sixty lakhs for the purpose of purchase of books, journals and equipment and construction of a hostel for girl students, apartments for teaching staff and a canteen for students has been sanctioned by UGC to the university. The question of granting recognition, as department of excellence, to Geology is also under the Commission's consideration, it is stated.

Legal aid clinic at Jammu Varsity inaugurated

The Legal Aid Clinic of the Department of Law, University of Jammu was inaugurated by the then Chief Minister of J&K State, Dr. Farooq Abdullah, on 5th June, 1984 in the Faculty of Law. The then Chief Minister called for low priced legal aid to ensure justice for all. He said that justice in our society remained a far cry for most of the poor in view of expensive legal counselling. The economically less fortunate, who did knock the doors of the courts finally ended up with total bankruptcy, without getting any justice because of inherent difficulties in the entire legal system, Dr. Abdullah observed.

Dr. Farooq Abdullah expressed his satisfaction on the setting up of the legal aid centre. It was a big step forward to get justice for economically weaker sections of the population. He however, cautioned the staff and the students of the Faculty that while helping the poor in defending their rights, they will face lot of odds and difficulties which should not dishearten them. He assured Govt.'s full help to the University for the noble cause.

Earlier, the Vice-Chancellor, Prof. M.R. Puri, welcomed the Chief Guest. In his address the Vice-Chancellor said that the establishment of Legal Aid Centre was a part of the University's programme to provide community services.

Prof. D.N. Saraf, Dean, Faculty, of Law, explained the objectives of setting up the Legal Aid Clinic. He pointed out that our adversary system of justice left the poor litigant out of the stream of justice. In the United Kingdom and the United States large amounts were being spent to help poor people in litigation. In the first few years the main objective of the Legal Aid Centre would be to provide Clinical Legal Education to LL.B. 3rd year students. Simultaneously steps will be taken to publicize the activities of the Centre not only in Jammu City but also in other districts. A team will shortly be leaving for setting up Legal Aid Camps in Bhadarwah, Doda and Kishtwar. The visits to the district will enable the team to gather data regarding problems of the poor. The data collected will enable the centre to streamline its activities in appropriate directions. The Centre will do its utmost to organise the poor by instituting legal literacy programmes. It will help the community by collecting information relating to the legal problems of the poor. It will also try to tap available resources by meeting officials and others for relieving the poor of their hardships.

On behalf of the Legal Aid Advisory Committee and Faculty of Law, University of Jammu, Dr. K.L. Bhatia, Reader, Department of Law and Director, Legal Aid Clinic thanked the Chief Guest Hon'ble Dr. Farooq Abdullah, Prof. M.R. Puri, Vice-Chancellor and other distinguished guests, the U.G.C. and the Legal Aid Implementation Committee.

Mother Teresa Varsity organises principals conference

A Conference of Tamil Nadu Women Principals was organised by Mother Teresa Women's University on the 19th and 20th of June at Kodaikanal. The conference was convened specially to get ideas, comments and suggestions from Women Principals to identify the areas of research. Mother Teresa Women's University is a unitary, residential type offering M.Phil. and Ph.D. research courses purely on the welfare of women.

Most of the participants agreed on making the University unique in its organisational structure — a multi- trans and inter-disciplinary one — functioning for the promotion of Women's Welfare. The University will not have departments of the traditional type but will start centres/cells/wings/homes that are pan departmental in structure and function. These will be research/study area based and not discipline or department based.

In functioning also the University will not replicate what other Universities are doing. Collaborative projects, inter/multi-disciplinary approaches, socially relevant and development oriented research studies, commitment to women's needs, problems, aspirations and welfare will be the major functional characteristics of the University, it is stated. The University will have collaboration with other Universities and research organisations in the state. These organisations will become functionally more scientific, research-based, problem oriented by their association with this University, it is hoped.

Finally the University will develop a resource institute/centre for studies on all aspects of women welfare and from this store-house the information will be disseminated through journals, newsletters, year books, research abstracts and other publications.

The University proposes to introduce Ph.D. and M.Phil. courses very soon.

PAU budget approved

The Board of Management of the PAU which met recently at Chandigarh under the Chairmanship of Dr. Sukhdev Singh, Vice-Chancellor has approved the budget estimates of the University amounting to Rs. 1687.62 lacs for 1984-85.

The State Government would contribute a sum of Rs. 1175.91 lacs while Rs. 395.04 lacs would be provided by the Indian Council of Agricultural Research (ICAR). Rupees 53.54 lacs would be provided by other agencies supporting University Research. Schemes worth Rs. 63.13 lacs would be financed out of their own income.

The University proposes to spend Rs. 815.15 lacs on Research, Rs. 541.60 lacs on Teaching and Rs. 143.00 lacs on Extension Education. A sum of Rs. 117.74 lacs would be spent on the construction of buildings at Ludhiana, Kaoni and other research stations of the University.

Two new Plan schemes at a cost of Rs. 35.00 lacs for the purchase of land for setting up a Research Station under National Agricultural Research Project at Bhatinda and for providing seed processing facilities at University research stations have been included in the budget. A new research project on Weed Control at a cost of Rs. 2.23 lacs is to be financed by the Indian Council of Agricultural Research and the State Government on 75:25 basis during 1984-85. Eleven miscellaneous schemes were completed and terminated during 1983-84.

Saurashtra University develops new courses in education

The university has revised B.Ed. and M.Ed. degree courses. The B.Ed. programme has been updated in the light of recommendations made by NCTE. The emphasis has been on preparation of technically skilled classroom teachers with greater social awareness. An extensively detailed programme of internal evaluation has been evolved.

The Department of Education has evolved diversified and enriched courses for the M Ed. degree. The programme aims at preparation of professional personnel required to staff colleges of education at various levels and at preparation of professional administrators and supervisors in Educational services. Innovations in the programme include courses for future psychometricians, counsellors, curriculum experts, researchers, and experts in pedagogy. All courses are research oriented.

Research unit on women's studies at SNDT

A project report on 'Changes in the food processing industry from traditional to modern forms and its impact on women's role and status' has been brought out by SNDT Women's University's Research Unit on Women's Studies. The project, sponsored by I.C.S.S.R. under an Indo-Dutch Programme, was conducted by Dr. (Smt.) Neera Desai. The study dealt with the development of food processing industry with special reference to a few selected industries—spices, pickles, papads and fish processing and its impact on women's role and status.

A report on the pilot study, undertaken by Mrs. Maithreyi Krishna Raj, on the advice of I.C.S.S.R. under the Indo-Dutch Programme on socio-economic conditions of women workers in the garment industry in Bombay has been published.

The study brought to the fore, the temporary nature of employment, constant fear of closure, discrimination and exploitation of women workers.

Adult education programme at Jiwaji University

A four-day orientation programme to train the Supervisors of Adult Education Centres run by the affiliated Colleges under Jiwaji University was organised from 28.6.84 to 1.7.84, Dr. K.K. Tewari, Vice-Chancellor, presided over the function. Dr. Tewari exhorted the Supervisors and functionaries of NAEP to be active to eradicate illiteracy from Chambal and Gwalior Divisions. He further emphasized if the illiteracy is removed from these regions and people made to understand the main reasons of their backwardness, the region will soon develop and all social evils will automatically disappear. Social uplift through adult education was very essential, Dr. Tewari said.

270 Centres of Adult Education will be established in August 1984 within the region under the control of the University. Arrangements are being made to provide training to Instructors also for Adult Education Programme.

Gurukula Kangri Vishwavidyalaya

Gurukula Kangri Vishwavidyalaya is poised to leap forward to improve the standards of physical health of its students A meeting of the Sports Council was convened by the Vice-Chancellor, Shri G.B.K. Hooja on 8.7.1984. Possibilities of beginning rowing competition were explored. But it was decided that presently, instead of going in for costly ventures, concentration should be on the ones which involve lesser funds but better

Calendar of Events

Proposed Dates of the Event	Title of the Conference/Seminar/Symposium/Workshop	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be Contacted
August 27-September 3, 1984	Executive Development Programme on Coal Preparation	To help in training persons employed in coal preparation plants and providing them with the theoretical base necessary for understanding the different unit operations, necessary in coal preparation.	Department of Chemistry, Fuel & Mineral Engineering, Indian School of Mines, Dhanbad.	Dr. T.C. Rao, Head
2nd week of October 1984	Symposium on Prospects and Perspectives of Mineral Resources and Mineral based Industries in M.P.	To evaluate the present state of the mineral potentiality and mineral industry and to assess the projected needs of the minerals for the industry in the next two decades.	Department of Applied Geology, Dr. Harisingh Gour Vishwavidyalaya, Sagar.	Dr. T.V.V.G.R.K. Murthy, Head.
October 29-31, 1984	National Symposium on Soil Pests and Soil Organisms	To discuss soil pests and effects of pesticides on soil fauna/organisms	Department of Entomology, Institute of Agricultural Sciences, BHU, Varanasi.	Dr. Lallan Rai, Prof. & Head.

applications and more active participation of students. The Vice-Chancellor suggested that courses such as rockclimbing, trekking, mountaineering, environment protection, tourism, etc. should be made a part of curriculum as far as possible.

A meeting of the Planning Board of the Vishwavidyalaya was held on 9.7.84. It was emphasized by the Vice-Chancellor to finish the VII plan proposals for development within two months with a view to making the undergraduate courses socially relevant. He also said that graduates coming out of the Vishwavidyalaya should be vocationalized as well as spiritualized. However, the emphasis should be on qualitative improvement and excellence, development of Pre-Ph.D. Courses, opening of new courses, production of books, especially of books through Hindi medium. Courses should be restructured and irrelevant courses must be deleted.

Reform of internal evaluation system at PAU

The Academic Council of the PAU at its 117th meeting while considering the suggestions made by the Resident Instruction Committee for improvement in existing system of internal evaluation, took the following decisions:

(i) Where courses are offered to more than one section, a common question paper may be set up in order to ensure uniformity in the standards of assessment.

(ii) The question papers may be invited in the beginning of the trimester in order to ensure that contents in a particular course are covered to a desired level, as is being done in the College of Agricultural Engineering.

(iii) The courses outlines of individual course should be prepared and given to students in the beginning of the trimester in which it is offered.

Workshop for college teachers in Statistics at KU

A workshop for college teachers in the Karnatak University area colleges was organised in the Department of Statistics during 23 May and 12th June, 1984, with financial support from the U.G.C. Twentyeight teachers working the different colleges affiliated to the Karnatak University participated in the workshop. Experienced Professors from the Universities of Poona, Osmania, Bangalore and Mysore in addition to the Staff of the Department, gave lectures and participated in the discussions.

The workshop was inaugurated by Dr. D.M. Nanjundappa, the then Vice-Chancellor and Professor M.V. Jambunathan, a former Head of the Department, presided over the function. Dr. Umakanth, Professor of Physics, delivered the valedictory address.

Training course in para-legal work

The SNDT University's Department of Continuing and Adult Education and Extension work conducted a three-month training course in 'Para-Legal Work' with special grant made available by the Ministry of Law, Justice and Company Affairs, Government of India. Thirty Eight candidates completed the course in first batch and 15 in the second batch. Training is imparted on: (a) Civil and Personal Laws dealing with marriage, divorce, maintenance and other remedies, (b) Property Laws including tenancy rights as they affect women; (c) The protective aspects of Labour Laws for women and children; (d) Legislation pertaining to children with regard to adoption, destitution, delinquency, etc.; (e) Laws dealing with crimes against women; (f) Jurisdiction, initiation, procedures and conduct of civil and criminal cases and writ petitions; and (g) Protective and Rehabilitative services.

Through this training, the knowledge of Women's and Children's Rights will percolate to the community through the trainees and to help unfortunate victims both in cities and rural areas to claim and assert their legal rights and win social justice.

The department has set up a 'Legal Cell' to offer counselling service and aid women and children in need of legal advice and help.

To spread legal literacy and create further awareness, the Department has devised two short courses of 15 sessions for the community and 4 sessions for students. These courses could be taken up and conducted by colleges and social organisations.

News from Agril. Varsities

Research highlights from Kerala Agril. University

● New Rice variety ready for release

A new rice culture, obtained by crossing Triveni and culture 1539, is ready for release from the Rice Research Station, Moncompu. The variety, named 'Karthika' (MO_7) is found to have tolerance against brown plant hopper, sheath blight, sheath rot and bacterial leaf blight.

Karthika will satisfy many of the Kerala farmers preference like red rice, better straw yield and easiness in threshing. It can yield upto 6-7 tonnes per hectare within 105-110 days.

● Intercrop in Cashew gardens

A trial to determine the best intercrop for growing between cashew conducted at the Cashew Research Centre, Madakkathara indicated that pineapple gave the best results. The crops included in the experiment were lemongrass, pulses and tapioca.

● Research on aromatic plants

The university has launched a

new research scheme to evolve new varieties of aromatic plants and to improve its cultivation practices and processing of essential oils. The scheme, fully financed by the I.C.A.R. with an outlay of Rs. 1.7 lakhs, is being implemented at the Aromatic and Medicinal Plants Research Station, Odakkali.

- **Towards efficient use of fertilizers**

The Indian Space Research Organisation has sanctioned under their RESPOND programme a research scheme for KAU to study the possibilities of using unsymmetrical dimethyl urea as an urea nitrification inhibitor for increasing efficiency of nitrogenous fertilizers. The Department of Soil Science and Agricultural Chemistry in the College of Agriculture, Vellayani will implement the scheme.

Tanzanian delegation visits HAU

A seven-member delegation from Tanzania led by Mr. Charles Omari, Commissioner of Education, Government of Tanzania visited Haryana Agricultural University (HAU) recently.

In a meeting with the Vice-Chancellor, Shri L.D. Kataria, Mr. Omari said that the team was much impressed with HAU's integrated approach of combining teaching research and education. He complimented the Vice-Chancellor for the research direction of the University which aims at the ultimate welfare of the producer i.e the farmer. Mr. Kataria explained in details the working and organisation of the University and the relevance of institutions of higher agricultural education in developing countries.

Earlier, the delegation visited the HAU animal farm and the Colleges of Veterinary Sciences, Agriculture, Animal Sciences. It also visited the Seed technology laboratory and research farm. Mr. Omari disclosed that in fact the delegation was a study-team visiting selected agricultural universities in the country, viz., USA, Kenya and India for submitting a report to the Government of Tanzania which is soon going to establish the nation's first Agricultural University at Moro Goro (Tanzania). During the meeting with the Vice-Chancellor Mr. Omari said that as there are many similarities between the two countries, the pattern of education adopted by HAU would be of much use to their proposed University. The other members of the delegation were Mr. Martim Kyomo, Dean, College of Agril. University of Dar-es-Salam, Prof. Robost Maxwell, Dean, College of Agril. University of East Virginia (USA), Mr. Joseph Ndunguru, Principal, Uyole Trg Institute, Mrs. K. Mponguliana, Director Higher Education and Mrs. V. Malma, Director, Research, Ministry of Agriculture, Mr. J.S. Mwaikambo, Minister Counsellor of Tanzanian High Commission, New Delhi.

News from Abroad

International co-operation in the field of fellowships

Yugoslavia and Algeria have just announced their intention to offer a series of fellowships in the context of the Internationl Programme for the Development of Communication. The first Member State will contribute 10 fellowships for three-month refresher courses at the Yugoslav Television, while Algeria will offer five fellowships for university studies in communication sciences.

In addition to these new contributions, two other Member States have renewed their offers of fellowships in the framework of the International Fund for the Development of Physical Education and Sport (IFDPES). Japan is providing 12 one-week fellowships for sports administrators and organizers while the Federal Republic of Germany is granting 25 fellowships for courses in athletics, each lasting one month.

[Courtesy: UNESCO News No 131, 2 July 1984.]

UNIVERSITY NEWS

University News is published weekly by the Association of Indian Universities to promote awareness of contemporary thinking on higher education. Views expressed in the journal are those of the authors and do not reflect the policies of the Association.

Articles are invited by the Editor on matters relating to University education. Manuscripts (in duplicate) should be sent to the Editor, University News, Association of Indian Universities, AIU House, 16 Kotla Marg, New Delhi-110002. They should be typed on one side of the paper, double spaced with wide margins. Each article should be accompanied by a summary/abstract of 100/150 words on a separate sheet.

Rates of subscription for University News are:

Period	Inland	Foreign	
	Rs	Surface Mail Rs	Air Mail Rs.
1 Year	40	180	350
For Academics/ Students	30		
2 Years	72	330	650
3 Years	100	425	900
5 Years	150		

Master of Business Administration : 1984-85

University of Cochin
School of Management Studies
Cochin

University of Calicut
Department of Commerce &
Management Studies
Calicut

Applications are invited for admission to the Master of Business Administration (MBA) programmes of Studies : 1984-85 offered by the Universities of Cochin and Calicut.

The following programmes of study are offered by the two Universities :

University of Cochin

MBA two year full-time	— 30 seats
MBA three year part-time	— 30 seats

University of Calicut

MBA two year full-time	— 15 seats

Eligibility

(i) MBA (Two year full-time)—Bachelors degree with at least 50 per cent marks in the aggregate, if the degree is in Arts/Commerce or 55 per cent marks in the aggregate if the degree is in Science/Engineering/Agriculture/Technology. SC/ST candidates are eligible for a concession upto 5 per cent in the minimum marks.

(ii) MBA (Three year part-time) — Those who are residing within easy access of the Cochin University Campus may collect details of eligibility directly from the School of Management Studies, University of Cochin.

How to apply

(i) Separate applications must be submitted for admission to each of the above programmes in the two Universities.

(ii) Requests for application forms and prospectus addressed to the Director, School of Management Studies, University of Cochin, Cochin-682 022 shall be accompanied by an application and registration fee of Rs. 60/- paid in cash or by a crossed Demand Draft or Postal Order drawn in favour of the Director, School of Management Studies and payable at any Bank in Ernakulam/Cochin-22 post office.

(iii) Requests for application forms and prospectus addressed to the Head of the Department of Commerce and Management Studies, University of Calicut, Tenhipalam, Calicut-673 635 shall be accompanied by a crossed Demand Draft for Rs. 60/- only drawn in favour of the Finance Officer, University of Calicut on any bank in Calicut or Tenhipalam.

(iv) Each request for application form should also be accompanied by a self-addressed envelope of size 25 × 17 cms. and carrying postage of Rs. 2 10.

(v) Those who are appearing at the final year degree examinations and are awaiting results may also apply. Such candidates will, however, be required to submit their marklists before a date to be notified later.

(vi) Last date for receipt of completed applications will be **16th August, 1984.**

Selection Procedure

Selection for admission will be based on (i) the performance of the candidate in a common admission test to be held on 25th August, 1984 at three centres—Trivandrum, Cochin (Ernakulam) and Calicut; (ii) the marks obtained by him/her in the qualifying examination; and (iii) his/her score in a group discussion and interview.

Director
School of Management Studies
University of Cochin,
Cochin-682 022

Professor & Head
Department of Commerce and
Business Management,
University of Calicut,
Tenhipalam,
Calicut-673 635

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies, Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is situated at 17-B, Indraprastha Marg, New Delhi-110 002. It is open from 10 a.m. to 5 p.m. Monday through Saturday except Second Saturday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Das, Manikanchan. *Quantitative variation in AB and H antigens : Serology, genetics and physiological aspects.* U Calcutta.

Biology

1. Sidha, V.K. *Ecological studies on arid regions of Kutch,* Gujarat State. Saur U, Rajkot.

2. Prasad, D.Y. *Studies on the limnobiology and limnochemistry of the upper lake of Bhopal.* Bhopal U.

Biochemistry

1. Prasad, Neelkamal. *Cellular and biochemical markers in the ecotypes of Hydra.* JNU, New Delhi.

2. Rao, Mukhya Pran. *Some aspects on the effects of hormones on brain and uterus of rat.* U Hyderbad.

3. Suresh Kumar. *Carbohydrate metabolism in sugarcane.* PAU, Ludhiana.

4. Viswanathan, K.R. *Studies on the metabolic changes associated with dietary restriction and subsequent refeeding.* U Mysore.

Microbiology

1. Pramanik, Amiyakumar. *Studies on the incidence of cysticercosis in animals and its public health significance.* U Calcutta.

Botany

1. Agarwal, Shikha. *Seed structure in some papilionoideae.* U Lucknow.

2. Ahuja, Ram Lal. *Studies on green ear disease of bajra with special reference to its histopathology.* Kurukshetra U.

3. Angrez Singh. *Genetical studies on some economic and quality characters in tomato,* **Lycopersicon esculentum** Mill. Pb U, Chandigarh.

4. Arunachala, A.S. *Combining ability and genotype x environment jnteraction in cauliflower,* **Brassica oleracea var botrytis L.** Pb U, Chandigarh

5. Balamanj, Gorthi V.A. *Biosystematic studies of the family Apocynaceae.* Andhra U, Waltair.

6. Chaudhuri, Debabrata. *Studies on the effects of X-radiation on Lathyrus sativus Linn. and the biochemical changes induced by radiation in the seeds.* U Calcutta.

7. Chowdhury, Bijaya. *Isolation and characterization of metabolic products involved in defence mechanism of plants.* U Lucknow.

8. Das, Sneha Praba. *Studies on drought resistance in rice.* Utkal U, Bhubaneswar.

9. Gurpaul Singh. *Studies on the thelephoroid fungi of Eastern Himalayas and adjoining hills.* Pb U, Chandigarh.

10. Indu Bala. *Anatomical and morphological studies of fruits and seeds of some economically important umbellifers.* Kurukshetra U.

11. Kapgate, Dashrath Kisanji. *Study of mega and micro fossil flora from the Deccan intertrappean basalts of India.* Nagpur U.

12. Kotasthane, S.R. *Studies on wilt of pigeon pea,* **Cajanus cajan (L) Mills.** RDV, Jabalpur.

13. Madan, Parmod Kumar. *Aerospora of paddy and wheat fields with special reference to plant pathogens and pollen allergens.* Kurukshetra U.

14. Padhy, Sachinanda. *Peroxodiphosphate cleavage by phosphomonoesterase.* Berhampur U.

15. Sane, Hemalata D. *Studies on vegetation and flora of Kanakeshwar hills, Kolaba District, Maharashtra State.* U Poona.

16. Santhakumari Amma, P.N. *Studies on genetic basis of selection in sugarcane.* Calicut U.

17. Shrivastava, Manjusha. *Effect of grazing on the productivity and mineral cycling in the grass lands of Ambikapur, M.P.* RSU, Raipur.

18. Sinha, Anubha. *Growth analysis, productivity and nutrient value of some important plants in a grass land ecosystem.* Kurukshetra U.

19. Tripathi, Rajni. *Study of pollen-stigma relationship in the family Asteraceae (Compositae) by EM and fluorescence microscopy.* U Lucknow.

Zoology

1. Ali, S.A. *Physiology and pharmacology of the melanophores of a teleostan fish,* **Channa punctatus**. Bhopal U.

2. Annalakshmi, M. *Studies on the seasonal changes in the structure and activity of the ovary and oviducts in some lizards* U Jammu.

3. Asha Devi, S. *Certain biochemical and physiological parameters of aging and disease.* Bangalore U.

4. Bhattacharyya, Indra Kumar. *Population status and ecobiology of pigmy hog,* **Sus salvanius** *Hodgson of Assam.* Gauhati U.

5. Chandiramani, S.S. *Biology of the gaur in Kanha National Park* (**Bibos gaurus**). Bhopal U.

6. Dutta, Amalesh. *Ecobiology of* **Colisa** *of the Brahmaputra drainage system in Assam.* Gauhati U.

7. Jaswant Singh. *Chromosomal studies on some fishes belonging to the carp and catfish groups.* Kurukshetra U.

8. Joshi, Mrunalini S. *Embryotoxic and cytotoxic effects of aflatoxin B (Alf. BI) on chick embryo.* U Poona.

9. Koshal. *Population dynamics and energetics of insects in tropical deciduous forest ecosystem.* Kurukshetra U.

10. Mishra, Jageshwar Nath. *A corelative anatomical study of Sira Marma.* U Lucknow.

11. Parhi, Gajendra Kumar. *Studies on the ecophysiology of two non-poisonous snakes of southern Orissa.* Berhampur U.

12. Patil, Subhash Shivagounda. *Glycerol ester hydrolase activity in Bat adipose tissue.* Shivaji U, Kolhapur.

13. Pawar, Kishore R. *Effects of selected pesticides on some freshwater animals.* U Poona.

14. Ramakrishnan, P. *Environmental studies of the birds of Malabar Forests.* Calicut U.

15. Reddy, Kavita S. *Cytogenetic investigations in mental retardation.* Bangalore U.

16. Sinha, Binay Kumar. *Studies on the interaction of rootknot nematode and fungus* (**Ozonium spp**) *on a vegetable crop i.e., tomato.* U Bihar.

17. Srivastava, Kushalanand. *A study of the heart and blood of two species of reptiles.* U Lucknow.

18. Thakur, Jagan Nath. *Effects of some chemosterilants on the reproductive organs of fruit fly,* **Dacus dorsalis** *Hendel.* HPU, Shimla.

19. Thomas, K.I. *Chromosomal studies in odonates.* Berhampur U.

20. Tripathy, Syama Kumari. *The relationship between the interrenal, thyroid and ovarian tissue of certain teleostan fishes.* Berhampur U.

21. Yadav, Abhay Singh. *Chromosome studies of some hoppers.* Kurukshetra U.

Medical Sciences

1. Tripathi, Ravi Dutt. *Maulik sidhant evam sanhita-Deha prakriti:-Ek shastriya evam prayogic addhyayan.* U Lucknow.

Agriculture

1. Babu, V. Ravindra. *Genetic analysis of response to soil alkalinity and salinity stresses in wheat.* Kurukshetra U.

2. Bhardwaj, Shakti Swarup. *Studies on fruit rot and leaf blight of bell pepper,* **Capsicum annum L.** *caused by* **Phytophthora nicotiana** *var* **nicotianae** *Walterhouse.* HP Krishi, Palampur.

3. Chandrasagar, G. *Effect of dates of sowing on growth field, quality and economics of intercropping of castor,* **Ricinns communis L.** *with coriander,* **Coriandrum sativum L.**, *redgram,* **Cajanus cajan L** *and sesamum,* **Sesamum indicum L.** *as contingency planning for weather aberrations.* Marath Krishi, Parbhani.

4. Choudhary, Bimlendra. *Agronomic studies on high intensity maize based rotations including fodder crops.* RAU, Samastipur.

5. Jaipurkar, Shashikant Anandrao. *Utilization of major nutrients by oilseeds as influenced by the soil fertility on vertisols of Madhya Pradesh.* JN Krishi, Jabalpur.

6. Manjeet Singh. *In vitro induction of genetic variability in cotton.* Pb U, Chandigarh.

7. Namdeo, Sukha Lal. *Phenological influences of rhizobial and carbohydrate loading in the biphasic system on the quality of legume inoculants.* JN Krishi, Jabalpur.

8. Painuli, Dhirendra Kumar. *Effect of exchangeable s dium on the crusting behaviour of sodic soils and methods of mi mising its deleterious effects.* Kurukshetra U.

9. Rajinder Parshad. *Genetic analysis of yield, physiolog cal and quality components in rice,* **Oryza sativa L-** HP Krish Palampur.

10. Rasheed Ahmad. *Experimental epidemiology of Per nosclerospora sorghi on sorghum.* U Mysore.

Veterinary Science

1. Amarjit Singh. *Studies on the nitrogen requirement maize fodder in relation to preceding crops and atrazine levels* Kurukshetra U.

2. Amin, Jaya Kumari Bapulal. *Studies on the antibacte rial effect of selected strains of* **Lactobacilli** *against food poison ing organisms.* Kurukshetra U.

3. Bhalla, Satyendra Kumar. *Effect of milk volatile com pounds on spoilage organisms to increase keeping quality of milk* Kurukshetra U.

4. Bhatia, Manohar Lal. *Triglyceride synthesis in goa mammary glands.* Kurukshetra U.

5. Brham Parkash. *Studies on nucleolar organizer region in chromosomes of cattle and buffaloes.* Kurukshetra U.

6. Chillar, Ram Kumar. *Effect of exchangeable sodium o the growth and chemical composition of fodder crops.* Kurukshetra U.

7. Datta, Umesh. *Genetic variation of adaptation to hea in sheep.* Kurukshetra, U.

8. Didar Singh. *Genetic and financial consequences of different bases of selection in buffaloes.* Kurukshetra U.

9. George, M. *Genetic studies on potassium concentration in the erythrocytes of cattle and buffalo.* Kurukshetra U.

10. Goswami, Surender Lal. *Sister chromatid exchange studies on chromosomes of cattle, buffaloes and goats.* Kurukshetra U.

11. Harinadha Rao, C. *Studies on serum amylase polymorphism in cattle and buffaloes.* Kurukshetra U.

12. Jain, Gyan Chand. *Studies on prostaglandin F_2 alpha and some reproductive hormones in blood plasma of buffalo heifers.* Kurukshetra U.

13. Jain, Neelam. *Effects of vaccines of the cytogenetic architecture of laboratory and dairy animals.* Kurukshetra U.

14. Kathuria, Suman. *Studies on mutation in lactic* **Streptococci** *with special reference to proteolytic activity.* Kurukshetra U.

15. Madan Lal. *Studies on tri-iodothyronine and thyrozine status of dairy animals as influenced by climate.* Kurukshetra U.

16. Mahadev, B.S. *Studies on variations in characteristics of the enterotoxigenic* **Staphylococci**. Kurukshetra U.

17. Malik, Ravinder Kumar. *Studies on an extracellular protease of a psychotrophic bacteria isolated from dairy products.* Kurukshetra U.

18. Misra, Rajani Kant. *Genetic analysis of growth survivability: Efficiency of feed conversion and carcass yield and composition in Sirohi goat and its crosses with Beetal.* Kurukshetra U.

19. Mohinder Singh. *Patterns of reproductive behaviour in murrah buffaloes.* Kurukshetra U.

20. Prakash, B.S. *Studies on the physiology of induced parturition in cattle and buffaloes.* Kurukshetra U.

21. Radhay Sham. *Effect of plans of nutrition and climatic conditions on reproductive performance of buffalo and bulls.* Kurukshetra U.

22. Ramesh Kumar. *A system optimization of buffalo productivity incorporating variable economic parameters.* Kurukshetra U.

23. Reddy, Krishna Mohan. *Breed structure and genetic analysis of pedigreed sahiwal cattle.* Kurukshetra U.

24. Sethi, Aruna. *Effect of dietary zinc on the conversion of β-carotene to vitamin A, on superoxide dismutase activity and keratinization in ovaries and testes.* Kurukshetra U.

25. Sharma, Arjava. *Breeding and selection methods for maximising profit function in buffaloes.* Kurukshetra U.

26. Sharma, Pravin Kumar. *Economic appraisal of intensive cattle development project, Karnal, Haryana.* Kurukshetra U.

27. Sinha, Rajiv Ranjan Prasad. *Aflatoxins in animal feeds their influence on certain metabolic functions and histopathological alterations in tissues of ruminants and nonruminants.* Kurukshetra U.

28. Sukumaran, M.V. *The effect of some factors on acceleration of ripening of cheddar cheese.* Kurukshetra U.

29. Tarkeshwar Prasad. *Studies on the influence of selenium on certain enzymatic activities, glutathione methyl donors and associated histological changes in certain tissues.* Kurukshetra U.

30. Tomar, Om Singh. *Studies on linear dimension and growth rate in calves at different levels of protein intake.* Kurukshetra U.

31. Upadhyay, Ramesh Chandra. *Work efficiency and associated physiological changes in crossbred and Haryana bullocks.* Kurukshetra U.

Veterinary Medicine

1. Sinha, Vijai Kumar. *Studies on experimental ruminal acidosis in buffalo calves with particular reference to electrolyte balance, biochemical changes in rumen liqour, blood, urine and its therapy.* PAU, Ludhiana.

2. Thakur, Dineshkant. *Studies on dermatomycosis in domestic animals and screening of some indigenous plant extracts and chemicals for their anitfungal activity.* Pb U, Chandigarh.

CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in AIU Library during June, 1984.

EDUCATIONAL PHILOSOPHY

Darling, John. A.S. Neill on knowledge and learning. *British J Ednl Studies* 32(2), 1984, 158-71.

Goldschmidt, Dietrich. The university as an institution; Present problem and future trends. *J Hr Edn* (D) 9(1), 1983, 65-75.

Kripa Shankar. Educational policy in context of development. *Mainstream* 22(44), June 30, 84, 21-3.

Rossides, Daniel W. What is the purpose of education? The worthless debate continues. *Change* 16(3), 1984, 14-21, 44-6.

EDUCATIONAL PSYCHOLOGY

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CLASSIFIED ADVERTISEMENTS

THE BHARATHIDASAN SCHOOL OF LINGUISTICS AND LITERARY STUDIES

TIRUCHIRAPALLI-620023

Applications are invited in the prescribed form for the following posts in the Bharathidasan School of Linguistics and Literary Studies:

Name of the Posts	Department/ Languages	No. of Posts
Professor	Tamil	1
Reader	Tamil	1
Reader	French	1
Reader	Japanese	1
Reader	German	1
Reader	Russian	1
Reader	Sanskrit	1
Reader	Bengali	1
Reader	Telugu	1
Reader	Malayalam	1
Reader	Kannada	1

Scales of Pay

Professor : Rs. 1500-60-1800-100-2000-125/2-2500

Reader : Rs. 1200-50-1300-60-1900.

All posts carry usual allowances and other service benefits as per University Rules.

Post Doctoral Research Fellowships

Department of Tamil	3
Department of English	2

Category A: 2 Fellows—Rs. 1000/- p.m. (fixed)

Category B : 2 Fellows—Rs. 1200/- p.m. (fixed)

Category C : 1 Fellow—Rs. 1400/- p.m. (fixed).

PLUS

Contingent grant of Rs. 2000/- p.a.

Tenable for a maximum period of 2 years.

Qualifications

Professor :	An eminent scholar with published work of high quality—actively engaged in research—experience in guiding research at doctoral level.
Reader :	Good academic record with doctoral degree in the concerned discipline—experience in guiding research work at doctoral level.
Post-Doctoral Research Fellow:	Good academic record with doctoral degree in the concerned discipline—Specialisation in Comparative Literature or Applied Linguistics including Translation.
Age :	Maximum age limit for all posts: 50 years.

The school reserves the right to fill or not to fill any or all the above posts and to revise the qualifications, experience, age limit etc., as well as consider names other than those who are applying for any post.

Application forms can be had from the Director-Designate, The Bharathidasan School of Linguistics and Literary Studies, Kajamalai Campus, Tiruchirapalli-620 023, Tamil Nadu till **30-7-1984** on requisition accompanied by a crossed Indian Postal Order for Rs. 20/- (Rs. 5/) in the case of Scheduled Caste/Scheduled Tribe candidates) drawn in favour of 'The Finance Officer, Bharathidasan University, Tiruchirapalli-1' payable at Tiruchirapalli.

The filled-in application form should reach the Director Designate, the Bharathidasan School of Linguistics and Literary Studies, Kajamalai Campus, Tiruchirapalli-620 023 on or before **16-8-1984.**

Dr. K. Chellappan
DIRECTOR-DESIGNATE

UNIVERSITY OF DELHI

DELHI-110007
Advt. No. Estab.-IV/90/84
Dated : 6-7-1984

Applications on the prescribed form are invited for the following posts in the University Services and Instrumentation Centre of the University:—

Sr. No.	Designation
1.	One Senior Scientific Officer
2.	One Scientific Officer
3.	*Three Senior Technical Assistants (Electronics) (One Reserved for Scheduled Caste/Scheduled Tribe candidates)
4.	*One Junior Technical Assistant (Electronics)
5.	*One Technician 'C' (Electronics)
6.	*One Technician 'C' (Electrical)
7.	*One Workshop-Technician (Reserved for Scheduled Caste/Scheduled Tribe candidates)
8.	*One Technician 'D' (Mech.)
9.	*Two Technicians 'C' (Mech.)
10.	*One Technician 'B' (Welder)
11.	*One Technician 'B' (Instrument Mechanic)
12.	*One Senior Technical Assistant (Glass Blowing)
13.	*One Technician 'B' (Glass Blowing) (Reserved for Scheduled Caste/Scheduled Tribe candidates)
14.	*One Store-Keeper

The Scales of Pay of the Posts are

Senior Scientific Officer : Rs. 1100-50-1600

Scientific Officer : Rs. 700-40-900-EB-40-1100-50-1300

Senior Technical Assistant (Electronics)/(Glass Blowing)/Workshop-Technician : Rs. 550-25-750-EB-30-900

Junior Technical Assistant (Electronics)/Technician 'D' (Mech.) : Rs. 425-15-500-EB-15-560-20-700-EB-25-750

Technician 'C' (Electronics)/(Electrical)/(Mech.) : Rs. 380-12-500-EB-15-560

Store-keeper : Rs. 330-10-380-EB-12-500-EB-15-560

Technician 'B' (Welder)/(Glass Blowing)/(Instrument Mechanic) : Rs. 320-8-400-10-450

All posts carry D.A., C.C.A. and H.R.A. as admissible under the rules in force in the University from time to time.

Essential Qualifications for

Senior Scientific Officer

At least 2nd class Post-Graduate Degree in Engineering (Electronic or Electrical Engineering (having Understanding and interest in Electronics) with 5 years of experience in R&D of Instruments or in operation, repairs and maintenance of sophisticated modern instruments.

OR

Similar Graduate Degree in Engineering qualification with similar 7 years experience.

Scientific Officer

At least second class Graduate degree in Engineering (Electronics/Electrical having understanding and interest in Electronics) with two years experience in operation and repair maintenance of sophisticated modern research instruments.

OR

Diploma in Electronics Engineering with 8 years experience or repair/

maintenance of modern research and laboratory instruments.

Senior Technical Assistant (Electronics)

Second class Graduate Degree in Engineering (Electronics)

OR

Diploma in Electronics Engineering with 5 years experience in repair-maintenance of laboratory and research instruments. (Candidates will be tested for their aptitude in Instrumentation.)

Junior Technical Assistant (Electronics)

Diploma in Electronics Engineering with 2 years experience in repair-maintenance of research/laboratory instruments.

Technician 'C' (Electronics)

Diploma in Electronics Engineering with at least one year experience in repair-maintenance of laboratory instruments.

OR

Certificate course from ITI in Electronics/Electrical (Having interest and understanding of electronics) with 5 years experience in repair-maintenance.

Technician 'C' (Electrical)

Diploma in Electrical Engineering with at least one year experience, Sufficient knowledge and understanding of Electronics so as to carry out repair-maintenance work on Electrical/Electronics instruments.

OR

Certificate Course from ITI in Electrical with 5 years experience in repair and maintenance of Electric Motors, Generators, etc. and should have understanding of repairing of electronic-circuits.

Workshop-Technician

Second class Graduate Degree in Mechanical Engineering.

OR

Diploma in Mechanical Engineering with 5 years experience in workshop practice and ability to lead and supervise the work of a group. (Candidate will have to pass trade test).

Technician 'D' (Mech.)

Diploma in Mechanical Engineering with 3 years experience in workshop practice.

OR

ITI in Machinist Trade with 9 years experience. (Candidate will be tested for trade test).

Technician 'C' (Mech.)

ITI in Turner Trade (One post) and in Fitter Trade (one post) with 7 years of experience in their respective trades. (Candidates will be tested for Trade Test).

Technician 'B' (Welder)

ITI in Welder trade with 5 years experience in Gas and Electrical Welding.) Candidates will be tested for trade test).

OR

Matric with 10 years practical experience of various kinds of weldings.

Technician 'B' (Instrument Mechanic)

ITI in Instrument Mechanic Trade with 5 years experience in handling and repairing of instruments/gadgets of various types.

Senior Technical Assistant (Glass Blowing)

Matric with 10 years experience in Glass Blowing workshop practice. Passing trade tests essential (graded joints, making vacuum apparatus, use of glass lathe, quartz work etc.).

Technician 'B' (Glass-Blowing)

Matric with 2 years experience in Glass Blowing workshop. The candidate should have handled various Glass Blowing equipments.

Store Keeper

Diploma in Electrical/Electronics with 1 year experience in handling and Maintaining Store of Technical Materials (Electrical, Mechanical and Electronics, Automobiles, etc.).

OR

Certificate course from ITI in Electrical/Electronics with 5 years experience in handling technical stores.

Special/Desirable Qualifications

Senior Scientific Officer

Repair: Maintenance of Micro-Processor base analytical instruments like NMR, Electron Microscope Mass Spectrometer, X-ray Spectrometer. Experience in Planning and Execution of R&D in instrumentation will be desirable.

Scientific Officer

Interest and inquisitiveness for participating in Instrumentation R&D activity will be desirable.

Senior Technical Assistant (Electronics)

Interest and aptitude for participating in R&D activity of Instumentation will be desired.

Workshop-Technician

Association with the fabrication of research project materials.

Technician 'D' (Mech.)

The candidate should be able to understand the Mechanical drawings and able to handle various workshop machines.

Technician 'C' (Mech.)

Turner : Handling of various workshop machines.

Fitter : Fabrication and Maintenance of compressors and pumps.

Technician 'B' (Welder)

Spot welding, Stainless Steel welding and Copper welding expertise.

Senior Technical Assistant (Glass Blowing) :

Experience in making precision glass, gadgets for R&D work.

The prescribed application form can be had from the Information Section of the University either personally or by sending a self-addressed envelope (size 13 cm x 28 cm.) with postage stamps worth Rs. 3.45 p.

The candidates will have to produce the original documents relating to their age, qualifications, experience etc. at the time of interview.

Applications (separate for each post) accompanied by attested copies of Degrees, other certificates, marksheets, published research articles, etc. should be addressed to the Registrar. However, for the posts marked asterisk(*) should be sent directly to the Principal Scientific Officer, University Services & Instrumentation Centre, Delhi University, Delhi-7. The last date prescribed for receipt of the applications is **4th August, 1984.**

Note: 1. It will be open to the University to consider the names of suitable candidates who may not have applied. Relaxation of any of the qualifications may be made in exceptional cases on the recommendations of the Selection Committee.

2. Canvassing in any form by or on behalf of the candidates will disqualify.

3. The University reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant.

Madan Mohan
REGISTRAR

UNIVERSITY OF POONA

GANESHKHIND, PUNE-411 007

Date : 26-6-1984

Advertisement No. 14

REQUIRES

PROFESSORS (3)

Mathematics	1
Physics	1
Journalism	1

(Grade: 1500-2500, Age limit—50 years)

General Qualifications

Eminent scholar with published work of high quality in the subject. Actively engaged in research. About ten years' teaching and/or research experience. Experience of guiding research at doctoral level.

OR

Outstanding scholar with established reputation having made significant contribution to knowledge.

Readers in Physics (2)

(Grade : 1200-1900, Age limit—45 years)

General Qualifications

Good academic record with doctoral degree or equivalent published work.

Actively engaged in research or innovation in teaching methods or production of teaching materials. About five years' teaching and/or research experience with minimum three years as Lecturer or equivalent position.

Lecturers (11)

Defence Studies	1
French	1
Physics	5
Politics and Public Administration	1*
Sanskrit	1
Zoology	1
Microbiology	1 (Temporary)

(Grade : 700-1600, Age limit—35 years)

*Post is temporary but likely to be permanently available subsequently.

General Qualifications

(a) Doctor's Degree or equally high standard research work.

AND

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in the subject. For developing Interdisciplinary Programmes, degrees in (a) and (b) above in relevant subject.

Application forms and more details of qualifications, experience. etc. for the above posts available in person for Rs. 10/- in cash or by sending self-addresesd envelops (23cms × 20cms), stamped of Rs. 2.50/- and Postal Order of Rs. 10/- to the Registrar separately for each post. Apply on or before **11th August 1984.**

Other things being equal, preference will be given to candidates belonging to backward classes.

S.P. Bhosale
REGISTRAR

NAGARJUNA UNIVERSITY

Nagarjunanagar,

NU/TS/Estt. 1/84-85

Dt. 13-7-1984

Corrigendum

In partial modification of this office advertisement No. NU/TS/Estt. I/84-85, dt. **21-6-1984** calling for the applications for appointment of teaching posts in the Nagarjuna University, it is informed that the specialisations noted for the following posts be treated as cancelled and they shall be treated general without any specialisation.

a. Professor of English;
b. Lecturer in History;
c. Lecturer in Zoology;
d. Lecturer in Law.

(Originally mentioned as preferenc will be given to those who hav specialised in any one of the following subjects:

1. Taxation, 2. Property Law, 3 Jurisprudence, 4. Family Law.

REGISTRAR

THE UNIVERSITY OF KASHMIR, SRINAGAR

Advertisement Notice

The last date for receipt of applications for the following posts is hereby extended upto and including **26-7-1984.**

(i) Reader in Pharmacy

(ii) Lecturer in Pharmacognosy, Pharmaceutical Chem., International Relations & Pol. Sc. (leave vacancy).

(iii) Documentation Officer.

Mohd Hamidullah Bhat
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UNIVERSITY OF NORTH BENGAL

No. 22/Advt./Estt./12/R-84

Dated: 6-7-84

Applications in prescribed forms are invited for the following posts: (a) Reader in Computer Science (One Post) and (b) Lecturer in Computer Science (One Post): .

Essential qualification for Reader and Lecturer: (i) M. Tech in Computer Science/Radiophysics and Electronics/Applied Physics or an equivalent Degree, or M.Sc. in Physics/Mathematics or in a relevant/related subject or an equivalent degree of a foreign University with consistently good academic records. (ii) Adequate experience in developing systems software, (iii) Knowledge of Fortran, Assembly language, PASCAL/ALGOL and COBOL/BASIC, (iv) for the post of Reader, ability to guide research workers and to carry out research and development projects.

Qualifications : For Reader and Lecturer as prescribed by the University Grants Commission. Details of qualifications for Reader and Lecturer may be obtained with the application forms.

(c) Technical Assistant (Junior) (Post One) : **Minimum Qualifications**: B.Sc. Acquaintance with electronic and electrical equipments desirable. Some familiarity with computer system and data processing would be preferable. M.Sc. with specialisation in electronics may also be considered.

Scales of Pay : (a) Reader : Rs. 1200-1900/-, (b) Lecturer: Rs. 700-1600/- and (c) Technical Assistant (Junior) : Rs. 450-1000/- respectively with other allowances and benefits as per University Rules.

All the posts are reserved for the candidates belonging to S.C./S.T. provided they fulfil the essential qualifications laid down. If S.C./S.T. candidates are not available or not found suitable, posts will be filled up from general categories. Hence non-S.C./S.T. candidates may also apply.

Choice of selection committee may not necessarily be confined to those who apply formally. No application except in prescribed application forms will be considered.

Prescribed application forms may be obtained from the office of the Registrar personally on payment of Rs. 5/- (Rs. 3/- for S.C./S.T.) in cash at the University Cash Counter or by sending a self addressed stamped of Rs. 1.40 envelope of 25 x 13 cms. with crossed I.P.O./Bank Draft of Rs. 5/- (Rs. 3/- for S.C./S.T.) in favour of the University of North Bengal. Filled in application forms (6 copies) along with one self-addressed unstamped envelope must reach the office of the Registrar, P.O. North Bengal University, Dist. Darjeeling, Pin : 734430 on or before **16-8-1984**.

REGISTRAR

GUJARAT UNIVERSITY

Applications are invited in the prescribed form available from the Registrar, Gujarat University, Ahmedabad-380009, so as to reach him on or before **4th August, 1984** for the following posts in the University Schools:

Sr. No.	Name of the Post	No. of Posts	Remarks
1.	Professor of Political Science	One	This post is reserved for *scheduled caste* candidates.
2.	Professor of Chemistry	One	This post is reserved for *Scheduled Tribes* candidates.
3.	Professor of Law	One	This post is reserved for candidates belonging to economically and socially backward class as per *Baxi Commission Report.*
4.	Professor of Physics	One	This post is reserved for *Scheduled Tribes* candidates.
5.	Professor of Education	One	
6.	Professor of Textile Chemistry	One	
7.	Professor of Polymer Science	One	
8.	Professor of Botany	One	
9.	Professor of Zoology	One	
10.	Professor of Microbiology	One	
11.	Professor of Mathematics	One	
12.	Professor of Statistics	One	
13.	Professor of Geography	One	
14.	Professor of Commerce	One	
15.	Reader in Textile Chemistry	Two	
16.	Reader in Polymer Science	Two	One post is reserved for *Scheduled caste* candidates.
17.	Reader in Botany	One	
18.	Reader in Life Sciences (Inter disciplinary courses)	Two	One post is reserved for *Scheduled Tribes* candidates.
19.	Reader in Physics	Two	
20.	Reader in Chemistry	One	
21.	Reader in Geography	One	This post is reserved for *Scheduled Tribes* candidates.
22.	Reader in Economics	Two	One post is reserved for candidates belonging to economically & socially backward classes as per *Baxi Commission Report.*
23.	Reader in Sociology	One	
24.	Reader in History	One	
25.	Reader in Hindi	One	
26.	Reader in Persian	One	
27.	Reader in Linguistics	One	
28.	Reader in Prakrit	One	
29.	Reader in Philosophy	Two	
30.	Reader in Education	One	This post is reserved for candidates belonging to economically & socially backward classes as per *Baxi Commission Report.*
31.	Reader in Political Science	One	This post is reserved for *Scheduled Tribes* candidates.
32.	Reader in Vocational Guidance	One	
33.	Lecturer in Textile Chemistry	Three	One post is reserved for *Scheduled Tribes* candidates.
34.	Lecturer in Chemistry	Two	
35.	Lecturer in Polymer Science	Three	One post is reserved for candidates belonging to economically and socially backward classes as per *Baxi Commission Report.*
36.	Lecturer in Statistics	One	
37.	Lecturer in Botany	One	This post is reserved for candidate belonging to economically and socially backward classes as per *Baxi Commission Report.*
38.	Lecturer in Mathematics	Two	
39.	Lecturer in Labour Welfare	One	
40	Lecturer in English	One	
41.	Lecturer in Languages Laboratory	One	

1	2	3	4
42.	Lecturer in Tamil	One	This post is reserved for *Scheduled Castes* candidates.
43.	Lecturer in Gujarati	One	
44.	Lecturer in Sanskrit	One	This post is reserved for *Scheduled Tribes* candidates.
45.	Lecturer in Commerce	One	This postis reserved for *Scheduled Caste* candidates.
46.	Lecturer in Law	One	

PAY SCALE : Professor : Rs. 1500-60-1800-100-2000-125/2-2500.
Reader : Rs. 1200-50-1300-60-1600 assessment-60-1900.
Lecturer : Rs. 700-40-1100-50-1300 assessment-50-1600.

A copy of the rules governing minimum qualifications can be obtained on request.

The above posts carry Dearness Allowance and other allowances as per the rules of the University. The benefits of Provident Fund and Gratuity will be admissible as per the rules of the University in force from time to time. The candidates selected for the above posts except Lecturer in Gujarati shall have to learn Gujarati language during the period of probation. The initial gross monthly salary on the minimum scale for Professor, Reader & Lecturer will be approximately Rs. 2945/-, Rs. 2600/- & Rs. 1730/- respectively. Residential quarters may be provided on request subject to availability.

Application form can be had on payment of Rs. 2/- payable in advance either in cash or by postal order. Money orders will not be accepted.

S.V. Shastri
REGISTRAR

PUNJABI UNIVERSITY PATIALA

Advertisement No. XIII PRO/Estt./ July, 1984

Applications are invited for the following posts:

1. Professor in Defence Studies: (One) (Grade : Rs. 1500-60-1800-100-2000-125/2-2500)

Qualifications

An eminent scholar with published work of high quality actively engaged in research. About ten years experience of teaching and/orresearch. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

2. Lecturer in English : (For Directorate of Correspondence Courses) : (One) (Grade: Rs. 700-40-1100-50-1600)

Qualifications

(a) A Doctor's degree or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing inter-disciplinary programmes, the degree in (a) and (b) above may be in relevant subjects.

Provided that if the Selection Committee, is of the view that the research work of a candidate as evident either from his thesis or from his published work is of a very high standard, it may relax any of qualifications prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years on the condition that he will have to obtain a Doctorate's degree or give evidence of research work of equivalent high standard within eight years of his appointment failing which he will not be able to earn future increments until he fulfils these requirements.

NOTE : "Persons with experience of Postgraduate teaching would be given preference."

3. Research Associate in the Deptt. of Punjab Historical Studies: (One) (Grade : Rs. 700-40-1100-50-1300)

Qualifications

M.A. History with good academic record. M.Phil. in History. Minimum 10 years Research experience. Preference will be given to the persons having editing experience of a Historical Journal & knowledge of Urdu.

4. Research Scholars : (Two in Punjabi and One each in Sanskrit, Business Management, Public Administration and Philosophy)
(Tenable for two years in the first instance @Rs. 600/- P.M. all inclusive)

Qualifications

Research Scholarship is open to persons preferably below the age of 30 years, who have obtained a Master's degree of a recognised university in the first or high second division (with at least 55% marks or B+ in the seven point grade system).

5. Junior Research Fellow in Business Management (U.G.C.) : One
(@Rs. 600/- P.M. all inclusive)

Qualifications

Junior Fellowship is open to persons preferably below the age of 30 years, who have obtained a Master's degree of a recognised University in the first or high second division (with at least 55% marks or B+ in the seven point grade system).

Note:

For the post of Reader & Lecturer, Good academic record will be determined as under:—

(i) A candidate holding a Ph.D. degree should possess atleast a second class Master's degree, or

(ii) A candidate without Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree; or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

General

Candidates for teaching & research posts should possess working knowledge of Punjabi upto Punjabi Parveshka standard. Persons from outside Punjab could however be considered for appointment but they will be required to give an undertaking in writing that they will acquire the requisite qualifications in Punjabi within a period of two years.

Higher start within the grade admissible depending upon the ability and experience of the candidate. House rent and Dearness allowance, Provident Fund and Medical facilities according to University rules.

Applications complete in all respects on the prescribed form accompanied by a crossed Postal Order worth Rs. 5/- (Rs. 2/- for candidates belonging to Scheduled Castes/Tribes & Backward Classes) drawn in favour of the Registrar, Punjabi University, Patiala, should reach the University by **4-8-84**. The forms can be had from the Production & Sales Officer, Publication Bureau, Punjabi University, Patiala on payment of Re. 1/- by sending crossed Indian Postal Order drawn in favour of the Registrar, Punjabi University, Patiala alongwith a self-addressed envelope of the size of 25× 10 cms. stamped with Rs. 1.70 postage which should be superscribed at the top in bold letters REQUEST FOR APPLICATION FORM FOR THE POST OF————.

Persons already in service should apply through proper channel. Those who are not in a position to submit their applications through proper channel before the due date should submit an advance copy before the due date and regular applications through proper channel by **7-8-84**.

D.S. Kang
REGISTRAR

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